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ABSTRACT

This publication describes adaptations of teaching methods and instructional materials to meet the special needs of rural students in the late 1930s. These "newer" types of instruction were often child centered, and included: (1) grouping subject matter into broad divisions such as social studies and language arts rather than the traditional "history," "English," etc.; (2) teaching specific skills as the need arose; (3) using materials based on the needs and experiences of students; (4) using a wider range of materials; and (5) viewing the curriculum as a means rather than an end. The yearbook contains nine chapters contributed by different administrators and practitioners. The first six chapters deal with specific areas of instruction: art, health, language arts, social studies, natural sciences, and music. The final three chapters examine: (1) the local community and environment as sources of instructional materials, (2) individualized instructional practices, and (3) the educational program and school activities as sources of student "socialization"--preparation for citizenship in a democracy and for the realities of a more urbanized environment. (SV)

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NEWER TYPES OF INSTRUCTION IN SMALL RURAL SCHOOLS

YEARBOOK 1938

THE DEPARTMENT OF RURAL EDUCATION
NATIONAL EDUCATION ASSOCIATION
OF THE
UNITED STATES

RC017781

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FEBRUARY 1938

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HISTORICAL NOTE

The Department of Rural Education of the National Education Association was organized at the Chicago meeting in February 1919. It was an outgrowth of the former Department of Rural and Agricultural Education, authorized by the Board of Directors in 1907. Its chief purpose is "to promote the general advancement of rural education thruout the United States." The Department meets twice a year, in February and in June, and welcomes all types of rural education specialists to its membership.

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Foreword

One of the distinctive problems of teachers in rural schools is to make special adaptations of methods and materials of instruction to meet the needs of rural pupils. In many parts of the country, experiments in the making of these adaptations have been carried on by classroom teachers and supervisors. The purpose of this Yearbook is to present the principles underlying some of these important adaptations, and descriptions of procedures followed in some outstanding experiments.

The materials and discussions presented herein make it quite obvious that the successful introduction of newer types of instruction in the classroom depends largely upon the teacher's insight, ideals, and understanding. Formalized subjectmatter, as such, has no place in the rural schoolroom whose instructional program begins with the child in the rural environment. Formalized subjectmatter becomes merely the tool for accomplishing vital life objectives. To give practical suggestions to teachers for thus harmonizing instruction with life situations and needs is a major objective of the authors of this Yearbook.

No attempt has been made to arrange the chapters in order of importance. The first six chapters deal with specific fields of interest, viz., art, health, language arts, social studies, natural science, and music. The last three chapters are concerned more with the general principles affecting the organization of the whole curriculum of the school. Each chapter has a brief bibliography which will be found suggestive for teachers and supervisors who wish to make further investigations.

For courteous permission to use copyrighted material, the editor and the Committee on Constructive Studies of the Department hereby express appreciation and extend thanks to the numerous state departments of education and the following publishers: Ginn and Company, Boston, Massachusetts; McGraw-Hill Book Company, New York City; F. A. Owen Publishing Company, Dansville, New York; Prentice-Hall Company, New York City; Public School Publishing Company, Bloomington, Illinois; and Bureau of Publications, Teachers College, Columbia University, New York City.

If this Yearbook is found to be of assistance in improving instruction in rural schools or in facilitating the work of rural school teachers and supervisors, its primary purpose will have been achieved.

HOWARD A. DAWSON
Director of Rural Service
National Education Association

February 1938.

NEWER TYPES OF INSTRUCTION IN SMALL RURAL SCHOOLS

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INTRODUCTION

IN 1933 THE DEPARTMENT of Rural Education of the National Education Association published a yearbook entitled *The Organization of Curriculum for One-Teacher Schools*. The book analyzed the problems of organization in small rural schools and suggested plans to meet them. The problems attacked were those which have retarded the rural school from its beginning, and even now make teaching in the small school different and difficult. On the whole, these are problems of organization and of school management, difficulties involved in the teaching of children whose ages range from five years to adolescence and whose learning spans the kindergarten and the eighth grade. These are, to be sure, the problems of all elementary schools, but when they are telescoped within the walls of one room and the strength of one teacher, it takes no specialist in rural education to recognize that the problems multiply in numbers and increase in difficulty.

INSTRUCTIONAL ORGANIZATION IN SMALL SCHOOLS

In the past, many plans have been promulgated for the solution of these problems. Frequently, these have been imposed by the state and by local administrators. The restriction of the number of grades to be taught in the one-room school, the providing of supervision, the granting of various types of subsidies in the form of state aid, and the consolidation of small schools are a few of the many administrative plans designed to alleviate the worst difficulties of the small schools. Significant reforms have also taken place within the schoolroom itself; and frequently these, too, have been administrative. Two of the plans most often adopted are those involving the individualization of instruction, and the grouping of pupils. Both plans were presented in the 1933 Yearbook, and the group plan was emphasized in some detail. Its thesis was that better teaching accrues if the group is substituted for the grade in the small school. Various plans for grouping grades and subjects were suggested as means for reducing the number of grades.

Paralleling the organization of classes was an organization of subject matter to fit the group plan and various suggestions were presented for the correlation, coordination, and integration of it. The yearbook described the plan as follows:

> A fundamental feature of the plan which these two combine to develop is the use of common organizing ideas or form of interest for all three groups of the school. There is a Home year, a Farm year, and a Community year in both the intermediate and the advanced groups, as in the primary group of the *New Jersey Handbook*.
>
> On each group level a central theme each year defines the work of that group in relation to the common integrating idea of the year's work for the whole

school. Thus in the Home year the central theme of the primary group is the Home and Home Life, of the intermediate group is Homes in Early Times and Now, and of the advanced group is Our Changing World. In the Farm year the central themes are, on the three levels, The Farm, How the World Gets Food, and The Place of Agriculture in World Civilization. In the Community year they are Community Life, Our Country's Manufactures, and Trade and Independence among Nations.

Around these central themes are organized units of work which incorporate the usual materials of the history, geography, and civics courses of the elementary school, and give opportunity also for correlated expressive activities in fine and industrial arts and English.[1]

The wide use of the yearbook thruout the United States indicated that the materials therein met a real need in the field of rural education. It was apparent, however, first to the Publications Committee and later to the teachers in the field that the 1933 Yearbook had merely laid the groundwork for a subsequent one. The organization of the school, suggested by the 1933 Yearbook, was in reality the skeleton or framework upon which real teaching rests. The significant items in all learning situations are the learner and what is to be learned. Proper organization of the situation and skilful technics of teaching may render assistance in making the learning process economical and efficient, but, in the last analysis, it is the learner and his experiences in learning that determine whether or not education is taking place.

THE AIM OF THE 1938 YEARBOOK

The 1938 Yearbook attempts to survey those experiences that take place by and thru the subjectmatter offered within the controlled area of the school and its environment. In so doing it is hoped that it suggests answers to some of the needs revealed by the yearbook of 1933. Two chapters here presented are in reality expansions of ideas presented in the 1933 Yearbook. The individualization of instruction is discussed somewhat at length and with encouraging practicability in Chapter VIII. The possibilities for socializing all experiences that properly lie within the organization of the small school are discussed in Chapter IX. These chapters are presented as a background for the development of modern practises in subjectmatter, because in a modern program of education both the form and the substance of teaching are important. Each is significant yet dependent upon the other.

Within recent years, rural school leaders have exhibited unusual courage in charting new courses to meet old problems. New practises, thus developed, have tended to tap unsuspected sources of strength and vitality in the rural field. Teachers everywhere are putting progressive theories into practise, because the small school lends itself,

[1] Dunn, Fannie W., and others. *The Organization of Curriculum for One-Teacher Schools.* Department of Rural Education, National Education Association, Washington, D. C.: the Department, 1933. p. 15.

better than the large system, to educational procedures which are child-centered. Wherever adequate state leadership is present, this improvement has reached the significance and importance of an educational movement. The Publications Committee of the Department of Rural Education for some time has been aware of this movement and has cherished the hope that reports of these newer types of instruction might be made available thru a yearbook of the Department. The 1938 Yearbook is a realization of this hope.

A glance at the several chapters in this book reveals a pattern of practises and well-defined directions of procedures toward which subject-matter appears to be moving in small schools. This is both surprising and significant. It is surprising because the agreement was reached, without consultation, by authorities located in widely separated parts of the United States, and interested in different areas of subject-matter. It is significant because it suggests that modern practises in the small schools are no longer the exclusive heritage of demonstration schools and favored localities, but that they are finding their way into the average school, and thence to the average child. The rural field may well take hope from this agreement, especially when more careful reading of the several chapters reveals that the practises reported are in harmony with a vital and significant philosophy of education. The trends in the newer practises most often appearing and upon which there seems to be agreement were six in number: (1) subject-matter tends toward broad divisions and large meanings; (2) skill technics are taught as the needs arise; (3) subject-matter develops from the needs and the experiences of children; (4) newer types of instruction demand newer types of materials; (5) the curriculum is conceived as a means rather than as an end in education; and (6) the teacher occupies a new and significant place in the newer types of instruction. These trends are discussed in subsequent paragraphs.

SUBJECT-MATTER TENDS TOWARD BROAD DIVISIONS AND LARGE MEANINGS

The tendency for subject-matter to achieve broad divisions and large meanings is evidenced in three ways. In the first place, there is a tendency to group many subjects under one heading and to make it co-inclusive. For example, Mrs. Green in Chapter III, entitled "Instruction and Activities in the Language Arts," states that the term "language arts" has supplemented the terms formerly used for English, composition, rhetoric, reading, formal and functional grammar, and the classics. The social studies are likewise a modern correlation of the traditional divisions of history, geography, and civics. Modern practises in health also cover large areas. Indeed, as Miss Drenckhahn points out in Chapter II on "Health Practises and Technics," these areas touch all phases of child life in the home and in the school.

In line with the above trend, there is a tendency to enlarge as far as subjectmatter is concerned, the scope of the elementary school. This is evident in practically every subject taught in the elementary school, but perhaps the point may be clarified with an illustration from science. Previously, this subject in the elementary school consisted almost wholly of units in biology. Today, in addition, units in geology, physics, zoology, astronomy, and chemistry are built around the interests of the children.

A further trend in the changing curriculum is the increasing tendency to integrate subjectmatter around centers of interest or activities. The 1933 Yearbook recommended this technic of organization for the small school and the 1938 Yearbook emphasizes it. Miss Keller presents this point of view clearly and effectively in Chapter VI on "Modern Practises in Music in Rural Schools." As she suggests, music as well as other subjects is rich in integrative possibilities. It can be easily and effectively correlated with geography, history, art, nature study, science, and literature. Music, thus presented, mirrors the social life of a people and achieves in the presentation new significance in modern educational practise.

SKILL TECHNICS SHOULD BE TAUGHT AS THE NEED FOR THEM ARISES

Developing contemporaneously with the broadening of the scope of subjectmatter is the trend for teaching the skill technics as the need for them arises. This is a break with the traditional approach to subjectmatter. In the past, subjectmatter was taught when the course of study and the daily program permitted it. The "recitation" set the boundary, and the children learned arithmetic in the arithmetic period; they "attacked" reading in the scheduled program assignment, and "manipulated" the vernacular when the English class was called. Under this conception of education the school failed to consider two important facts: (1) children do not learn in compartments of time and space, but at all times and under all circumstances; (2) learning takes place more economically and quickly if a real need for it exists. Modern educational practise has not ignored these facts, but has built upon them. Hence, we find children in the second grade learning about quotation marks and other punctuation forms when the reading assignment employs them. Children actually need this information to interpret the story, and shortsighted indeed is the teacher who postpones this learning until the grade designated in the course of study is reached. To separate language teaching from other phases of school work is to make of it an artificial thing, according to Mrs. Green, and on this all thoughtful teachers will agree. Likewise, children are taught technics in art, music, writing, and reading as the need arises, regardless of subject and of scheduled period. For example, the need for

teaching perspective in art might arise in a social studies activity, in the making of stage scenery for an English dramatization, or in the sketching activities of a regularly scheduled art period.

Perhaps a word of caution for the inexperienced teacher is timely here. It is not recommended that the course of study be abandoned and that the teacher follow "willy-nilly" the needs of children and subjectmatter, nor is it suggested that teaching should proceed without direction and that the tool subjects be taught incidentally. The recommendation is that the course of study should be used as a guide rather than as a prescription.

SUBJECTMATTER EMERGES FROM THE NEEDS AND THE EXPERIENCES OF CHILDREN

The traditional approach to the organization of subjectmatter has been almost wholly philosophic. Children in the elementary schools were taught what adults thought they ought to know, usually in terms of the remote needs of an adult world. For example, one of the earlier books in Rural School Management urged prospective rural teachers to emphasize citizenship education thru school clubs because children, as adults, would need this training to preside at schoolboard meetings! Thus the whole important field of citizenship was largely vitiated because no effort was made to develop democratic practises which would meet the immediate needs of children. That this shortsighted policy does not lie wholly in the past was illustrated in a recent article written by Edwin R. Embree of the Rosenwald Foundation.

> In a Negro school a teacher holding a health catechism read from the text, "Why should we wash and comb our hair"? And the row of little Negroes droned back the answer, "So it will not get stringy and fall down in our eyes." Neither teacher nor pupils seemed to think this a surprising answer from pupils whose hair was so kinky that it never could get into strings or hang down anywhere.[1]

Thus much of our learning has been divorced from actual life needs!

The authors of several chapters in this yearbook, almost with unanimity, point out that modern educational practise lies in opposite directions to the two examples stated above. An earnest effort is made to ascertain the needs of modern youth, and subjectmatter is based upon them. While remote environments and interests are not ignored, the immediate environment is considered the more important, and constitutes the point of departure for much of the educational process. Miss Dunn properly presents the point that the rural school has vast resources for the "scientific experiences in the natural environment which sur-

[1] Embree, Edwin R. "Little Red Schoolhouse 1938 Model." *The Atlantic Monthly*. November 1937. p. 636.

rounds it." The chapter in health urges rural teachers to take the immediate problems of local communities as the genesis for teaching health theory and practises. Mrs. Green emphasizes the fact that the environment, even for the very young child, gives him more skill in his use of the vernacular than years of adult study of a foreign language will achieve. Miss Heffernan in Chapter IV on "Newer Types of Instruction in the Social Studies" presents and defends the point of view that curriculum-makers give evidence of an increasing recognition of the responsibility of the school to select experiences related to contemporary life as well as to the immediate environment.

Miss Holdford in Chapter VII, "Local Environment: As a New Source of Instructional Materials," does the Department and rural education, in general, a real service. She attacks a problem which has long pressed for an answer. For some time curriculum specialists have urged teachers "to draw upon their environment for teaching." Teachers have been eager to do so, but the practical question of collecting usable materials always obtruded at this point. "How can we," said they "select teaching materials which are pertinent, of interest to children, and genuinely educational?" Miss Holdford answers this question in part. Out of her own supervisory experiences at the Bethlehem Central School, Delmar, New York, she presents a case study of teachers actually answering their own questions. They find the answer to their problems in the same way that children working thru a unit answer their own—thru activities.

There is general agreement, too, that experience in the environment is basic to learning. Miss Drenckhahn in her health survey reports an increasing tendency to make the school environment a source of health experiences thru which children establish desirable health habits. Experiences are a necessity for creative writing, according to Mrs. Green, who suggests sources in nature from which rural children may enrich their lives, and hence their expression, thru writing. Democratic living is the only way by which children arrive at adequate standards of citizenship, according to Miss Heffernan. Miss Dunn reports that no words, written or spoken, or any study about things can substitute for the genuine understandings in science which comes from "first-hand experiences of observing, watching, making, and doing." Agreement thus appears to exist that modern practises in education place high premium upon the environment of children and the experiences which it affords.

All of this is another way of saying that the curriculum should become child-centered. Before this can come to pass, however, it is necessary that teachers know much about child nature and child nurture. Teachers cannot build upon child needs, interests, and experiences, until they know what they are at each stage of maturity. Research in the field of child development, as limited as the results are at present, gives us

guidance at this point. Difficulty lies, however, in the fact that practically all the research in child development has been pursued with urban children in urban environments. Miss Dunn emphasizes this fact in her chapter on science when she states that only one study has been made in that field which genuinely represents the interests of the rural child. This paucity of research in the rural field suggests both an opportunity and a responsibility for those who work in it.

NEWER TYPES OF INSTRUCTION DEMAND NEWER TYPES OF MATERIALS

The above paragraphs suggest procedures which involve many activities. These in turn suggest many mediums of expression. In the past, children, on the whole, expressed themselves thru the 3 R's and sometimes, for the fortunate few, the program of the day was enlivened by a "drawing lesson." Today we find children answering their need for expression thru many mediums: dancing, cooking, singing, painting, sculpturing, sewing, acting, and constructing. Obviously, these mediums necessitate different materials from those meager ones of pencil, book, and paper which met the demands of a narrower curriculum. Clay, musical instruments, cloth, wood, paints, radios, hammers, saws, and books are a few of the many materials with which the modern rural school is equipped. The contributors of this yearbook consider the use of this newer type of equipment a necessity.

Quoting Mrs. Green: "This new approach to language calls for new kinds of materials. . . . It cannot be done with a single textbook for reading and one for composition. . . . Another necessity for such a school program is many reference books and materials, not limited to encyclopedias."

Again from Miss Heffernan: "The social studies unit provides for rich vicarious experiences. . . . It utilizes pictures, slides, motion pictures. . . . The child is given much opportunity to clarify his concepts thru many different forms of expression such as construction, drawing, painting, modeling, dramatization, music, and other means by which his experiences may become vital and meaningful to him."

THE CURRICULUM IS FUNCTIONAL

One of the outstanding characteristics of the newer types of instruction is the functional conception of the curriculum. Subjectmatter thus becomes a means rather than an end, and achieves value only as it contributes to child growth in desirable directions. All subjectmatter then achieves practicability, no matter how cultural its source. Music is a case in point. Traditionally, music has been accepted as a cultural subject to be enjoyed only by those children blessed by nature and by nurture. Educationally, it was considered a "frill" and, since rural schools could not afford "luxuries," rural children went unlearned and untaught. Today

music is considered the natural birthright of every child. There has been no great increase in special teachers of music for rural areas, but every teacher is expected to teach music, just as he is expected to teach the 3 R's, and for the same reasons. It gives the child a tool for more adequate learning in a modern world.

Art, too, has undergone a like metamorphosis. Considered formerly like music as a field for the gifted only, it is today considered essential for all children. We live in a world beautified by line, form, and color, and art gives us a practical as well as a cultural approach to it. Art, therefore, functioning in the life of the individual helps him to arrange and care for his room, select his clothing, set a table, and select a picture. Examples could be multiplied since each contributor presents the theory that subjectmatter should function in lives of children.

IN THE NEWER TYPES OF INSTRUCTION THE TEACHER OCCUPIES A STRATEGIC PLACE

No one can read the contributions of this yearbook without realizing that the teacher holds a strategic position in the newer types of instruction. The teacher in the small school has always been important and his task has always been difficult. Since he taught within the same day subjects ranging from kindergarten to high school, his knowledge needed to approach the encyclopedic. Moreover, the small school has been lacking in books and reference materials, so that children depended upon the teacher for all information which lay outside the narrow range of a single textbook. Because leadership is frequently lacking in rural areas, community responsibility naturally fell upon the teacher, so that he became three people in one: community leader, librarian, and teacher.

For these manifold duties the average rural teacher has been poorly prepared. Research studies reveal to what extent this unpreparedness has gone.[3]

All the studies have agreed that the average rural teacher is the youngest, the least experienced, the most poorly educated, and the lowest paid in the profession. No national study in the status of the rural teacher has been published since 1933, but it is the belief of educational leaders that the small school has greatly profited from the financial depression and its oversupply of teachers. For the first time in the history of American education, except for perhaps in the early Colonial period, rural schoolboards have been able to select rural teachers from the upper quartiles of graduating classes. This influx of vigorous, well-educated

[3] See *National Survey of the Education of Teachers*, p. 346. Vol. 5. United States Office of Education, 1933, Bulletin 10. Government Printing Office, Washington, D. C. [4]Coffman, Lotus D. *Social Composition of the Teaching Population*. Contributions to Education, No. 41. New York: Bureau of Publications, Teachers College, Columbia University. [5]Wofford, Kate V. *A History of the Status and Training of Elementary Rural Teachers in the United States, 1860-1930*. Pittsburgh: Siviter Press. 1935.

young people into the rural schools should normally react favorably upon the rural field; but studies are needed on this point. Until such studies can be made, opinions on results must lie within the realm of conjecture.

Be that as it may, the contributors of this yearbook look to the rural teacher of the present for much of the progress in the development of the newer types of instruction. The success of the program rests squarely upon the rural teacher, according to Miss Heffernan. It rests upon his insight, his ideals, and his understanding. This yearbook has been written to assist rural teachers in the newer practises now developing in small schools, and it is the earnest wish of the Committee on Publications and Constructive Studies that the book will fulfil its mission.

Chapter I

ART INSTRUCTION

Florence Tilton Ahlfeld

ART INSTRUCTION in rural schools of the United States is at present swiftly acquiring momentum. As recently as 1930, only a few counties in this country could boast of an art supervisor. Now in several states a well-developed system of state and county supervision has been established. Notable among these are California, Delaware, Ohio, and Pennsylvania, and scattered experiments in a number of other states, as for example, in Alabama and Colorado. In a number of states, such as Indiana and Iowa, where consolidation has been highly developed, the consolidated schools often have at least a part-time art instructor.

Teachers are seeing their limitations in the teaching of art. On every hand one hears, in ever increasing volume, a demand for help in the way of enlarged opportunities for adequate preparation in the subject in teachers colleges and normal schools; of published helps for teachers which are in line with recent educational trends; and of administrators and supervisors who have an adequate understanding of the subject. To meet these demands there have appeared within the past few years two new art magazines—*Design* and *Art Instruction*—for teachers. A national organization of art teachers is facing the needs of rural teachers as well as of urban teachers.

Another evidence of progress is an awakening on the part of rural women in clubs and in adult education classes to the arrangement of furniture, color for the home and its environment, the designing of clothing, and the various crafts. The conception of art as being merely painting is swiftly passing among rural women. This is reacting on the teaching of art in our schools.

The teaching of art in the vast majority of one-room rural schools is still discouraging. One finds traced bunnies filled in with crayon; drab walls without colored pictures, still decorated with fly-specked pictures of George Washington and Abraham Lincoln; and facsimiles of the Constitution of the United States. In many sections one looks in vain for evidences of group projects, such as building a model of the mouth and deltas of the River Nile with miniature pyramids, Egyptian boats, etc. Again evidence of free natural creative expression of emotional ideas are quite lacking. A box of eight colored crayons, sheets of nine-by-twelve-inch manila paper are frequently the only art ma-

terials available, and these are often purchased by the teacher out of her meager salary. In a recent study of art teaching in Hennepin County, Minnesota, it was found that 40 percent of the teachers had never had any art instruction of any kind at any period in their school life.[1] Every county superintendent and supervisor of rural work should be vitally concerned with how this picture can be changed.

One finds in practise many types of art teaching. The practises can be described in terms of five levels of efficiency and desirability under four major categories: sources of motivation, degrees of originality, approaches stressed, appearance of the room.

I. Criteria for the Judgment of Art Activities

I. *Sources of Motivation for Art Teaching*

Level I
1. Patterns, printed directions for tracing and coloring, cutting, and constructing
2. *Normal Instructor* and *Primary Plans Handicraft*
3. Projects by other teachers

Level II
1. Asks supervisor and county superintendent for help
2. Uses *Normal Instructor* and *Grade Teacher*
3. Uses state course of study for inspiration, not exact copy
4. Uses suggestions from teachers college attended

Level III
1. Uses logical outline found in the state course of study
2. Uses devices and tricks published in so-called teachers helps; uses *The Normal Instructor* and *Grade Teacher*
3. Ready-made step-by-step art lessons; what to do and how to do it

Level IV
1. Uses inspirational material from training period
2. The *School Arts Magazine* and revised courses of study such as South Dakota Curriculum in Art
3. From children's interests

Level V
1. Work planned about children's interests
2. Use of books and articles by Margaret Mathias, Sallie Tannahill, Jane Betsy Welling, and other educators writing for such magazines as *Design* and *Progressive Education*
3. Does not use devices
4. Refers to educational principle for the planning of art lessons

II. *Degrees of Originality*

Level I
1. Tracing
2. Cutting from patterns
3. Areas filled in with color
4. A little dictation, step by step, by the teacher
5. Given printed directions to follow exactly
6. Almost entirely individual work

[1] A field study of art teaching in one-room rural schools of Hennepin County, Minnesota. Florence Tilton under the direction of Leo Brueckner, University of Minnesota, Minneapolis, Minn., 1935. (Unpublished.)

Level II
1. Less training and copy work
2. More teacher dictation step-by-step procedure
3. Use of printed directions
4. A little group work
5. A little child-originated work

Level III
1. Much teacher-directed work not copied from pictures
2. More child origination
3. Use of imagination and memory in presenting the work

Level IV
1. Teacher direction, but not dictated
2. Child originated ideas stressed
3. Imagination and memory
4. Much freedom, both physical and mental

Level V
1. Largely child-originated
2. Effective thinking with art media as forms of expression
3. Art is regarded as a phase of all school work
4. Written work is evaluated for beauty
5. The schoolroom and the clothing choices are considered problems of beauty

III. *Approaches Stressed*

Level I
1. Technical
2. Stresses skill
3. Learning by heart color charts, design theories, perspective rules, etc.
4. Neatness as a major objective
5. Emphasis on a finished result

Level II
1. Technical skill still the one most stressed
2. Recognition of the value of appreciation
3. Recognition of possibility of art as a means of expression
4. Some information

Level III
1. Information, skills, and technical performance receive major emphasis
2. Appreciation of art heritage
3. Recognition of the necessity of good taste

Level IV
1. Emphasis first on consumer use of art appreciation of good taste
2. Recognition of the value of creative effort

Level V
1. Major emphasis on self-expression
2. Development of good taste considered vital
3. Information less important
4. Technical approach stressed

IV. *Appearance of the Room*

Level I
1. Little thought given by either teacher or pupils
2. No grouping of small, displayed materials
3. Piano across the corner of the room
4. Books poorly arranged

Level II
1. General order better than in Level I
2. The teacher applies good taste much more; but does not use the room opportunities for teaching arrangement
3. Furniture follows lines in the room

Level III
1. Formalized appearance very tasteful
2. Teacher choices thruout
3. Furniture with lines of the room
4. Taste in color choices good
5. Arrangement of books with care

Level IV
1. Arrangement of school a problem considered for principles of design in lines, colors, and shapes
2. Bulletin-board a group responsibility

Level V
1. Pupil controlled thru objective of civic pride
2. Principles of good arrangement so well learned that they are used effectively by the children in the room arrangement
3. Learning to choose thru choosing.[2]

WHAT IS ART EDUCATION?

From a study of the above levels of art teaching as it exists today, the reader may well ask what then is meant by art education. "Art education" is the term used to cover those phases of child development that deal with individual and group expression and appreciation of what constitutes beauty in environment, clothing, painting, sculpture, architecture, and minor arts, and in creative efforts in the plastic arts and crafts. This subject has been variously interpreted by educators and has been expanded to include many types of activities. The subjectmatter of art education today deals with the principles of beauty as applied to the use of line, form, and color in such practical situations as the care and arrangements of the schoolroom, the choosing of clothing, and the dramatization of incidents in the social studies and literature.

As an example of the scope of art in instructional activities, a few of the projects utilized in the fourth grades of Sussex County, Delaware, are listed here:

1. Study of color from observation of nature
2. Painting fall flowers
3. Painting trees
4. Making Egyptian life a reality for modern children thru such projects as:
   a. Drawing pictures of Egyptian activities
   b. Making Egyptian boats
   c. Making pyramids
   d. Making masks
   e. Decorating the schoolroom with Egyptian designs

[2] These are only portions of the levels as they were prepared and used in the survey of art teaching in Hennepin County, Minn.

f. Planning a stage setting for an Egyptian dance originated by the children
g. Making a model of the delta system of the River Nile

5. Lettering signs to use for an exhibit of school work
6. Making and coloring an illustrated map of the state, showing Delaware industries
7. Making Christmas gifts for parents
   a. Some modeled dishes out of clay
   b. Others designed hot dish mats and colored them on wall board
   c. Some wove simple bags
   d. String containers were made by decorating ice cream containers with wax crayons
8. The children made individual and group illustrations of stories studied and of things studied in social studies; one such frieze was a large wall painting in tempera paint on brown wrapping paper of life in a South American jungle
9. Helping make a suitable decoration for cupboard doors which otherwise might have remained unsightly.[3]

APPROACHES IN THE TEACHING OF ART

There are four avenues of approach to the teaching of art: (1) *informational*, (2) *appreciative*, (3) *expressive*, and (4) *technical*. At this point comment will be made only on the second of these approaches. The appreciative approach has to be considered in all phases of school life. The child is making choices involving taste in every subject and all thru school. When he writes on the blackboard or on paper, he arranges that written material. Because the formation of taste is based on constant choice, we call it a concomitant learning. We cannot teach art appreciation in the broadest sense thru setting aside a period for such instruction any more than we can teach a child to use beautiful English thru a formal grammar period. The art objectives deal with all art learning whether it be instruction in specific skill or whether it be the choosing of colors.

Objectives—The general objective for the teaching of art is, "To develop in the individual the ability to meet intelligently art problems which confront him in daily living."[4] This general objective may be analyzed into the following more specific objectives:

1. To assist children to make choices which will develop ability to create artistic environments thruout life
2. To make art a vital part of the life of the individual thru contacts with beauty in nature, in industrial products, and in the fine arts
3. To develop in children imagination, freedom of expression, and integration of personality thru self-expression by art media

[3] All of the projects were developed by teachers of fourth-grade children in 1936 under the guidance of the author and the supervision of Rachel Taylor, state supervisor of art in Delaware.

[4] *South Dakota State Curriculum for Elementary Schools*, p. 1350. Lena Wetner, art chairman, directed by Grace Baker, State Teachers College, Greeley, Colo.

4. To offer opportunities for the enjoyment and understanding of art.

5. To develop interests, hobbies, and creative efforts that may continue thruout life as leisure-time pursuits.

6. To make available to children such information about art and to develop in them such technical skills as are necessary to successful participation in school-life activities.

A creed—In the making and execution of any plan for instruction in art certain fundamental principles should be observed. The principles embodying a sound philosophy for the guidance of rural teachers are presented in the following creed.

The Educational Creed for Teaching Art

1. Esthetic expression is a natural form of self-fulfilment which has been vital to the human race since the beginning of time.

2. The satisfactory life includes for the individual, development in some form of creative expression. Without it, emotional, mental, and physical coordination cannot be complete.

3. Interest in the idea to be expressed is of first importance in the teaching of art. Abstract facts about natural appearances, or abstract principles of design, are not of themselves vital to children. The ideas expressed may be centered about many interests, such as play or home life; habits, customs, and dress of foreign peoples; or the dramatic incidents of stories.

4. Good taste cannot be taught abstractly. It results from a consciously directed series of experiences in making choices and forming judgments of colors, shapes, and textures.

5. Art is an integral part of all cultures both present and past. An understanding of any epoch in the culture of a people cannot be complete without an understanding of the esthetic expression of the people of that epoch.

6. To interpret life today, one must study not only the musical compositions, the literary and dramatic productions, the paintings, the sculpture, and the architecture of our day, but also the designing of our industrial products and the participation of the so-called artistic vocations in the social structure of the present.

7. Work in the schoolroom with materials which call for mental and muscular coordination is a necessity in a complex civilization which has taken all industrial production out of the home. Such crafts as pottery, metal construction, jewelry making, and the tooling of leather must continue to be of increasing importance in the curriculum together with a definite program of physical activity to provide for this coordinated muscular development.

8. There must be a variety of media, materials, and art tools. These should vary in kind, quantity, and size of tool with the varying abilities of different age-levels. Little children find large brushes, thick paint, crayons and chalk of a large size better suited for their use than do older children who prefer pencils, small brushes, and water-color paint. Scissors, colored paper, and paste are not suited to the muscular ability of all children in any group at any age level in the elementary school.

9. The principle of readiness is of the greatest importance in the teaching of art. Self-expression *cannot be forced*. Presentation of abstract information often defeats its own purpose. All children cannot develop a high degree of artistic skill; therefore, training for skills beyond the mental, physical, and

A fourth-grade unit on Jungle Lands in the Warm Springs School, Alameda County, California, shows that art is functional, serving all subjects.

emotional ability produces aversion to the enrichment and concomitant learnings most useful in the ordinary pursuits of life.

10. The results obtained must give satisfaction. The lesson must have enough familiar elements to attract the interest of the learner and enough new and unfamiliar material to challenge him to sustained endeavor. It must require only the amount of time that the interest span of the individual can utilize.

11. Art teaching with any group should be largely by the teacher most familiar with the group. It is desirable to have a competent, well-trained art specialist to assist the teacher in knowing how to develop the appreciations, informations, skills, and concomitant learnings needed. The actual projects chosen for this work are best chosen by the teacher who is familiar with the social studies and English work. Most teachers need assistance with the more technical processes involved. If teacher and supervisor plan this work to include only those processes useful to children during childhood, these will not be beyond the ability of the most inexperienced rural teacher. He will, of course, have to spend as much effort learning the theory of design, color, form, and the craft processes as he does acquiring information in any other subject that he is required to teach.

ORGANIZATION OF ART ACTIVITIES IN THE ONE-ROOM SCHOOL

The problem of finding time for art lessons is a very real one for teachers with many pupils and an overcrowded program. In the past, much time which could have been devoted to original work by beginners has been spent in filling in areas with color and in tracing pictures. The clear-thinking, well-trained teacher will find opportunities to fill odd moments with worthwhile original work in design, illustration, craftwork, or drawing. However, even if he uses all such opportunities, and even if the social studies and literature lessons are used for subjectmatter for the arts, there are still technical phases of the subject that should be presented in special art periods.

How should the one-room rural teacher organize his work so that all eight grades can have the maximum of instruction in the minimum of time? The suggestion is given that the teacher present the art work to all eight grades at once. To assist teachers of one-room schools to carry out such a plan, Charts I and II are presented. (See pages 24 to 26.)

To follow the plan suggested in Chart I, the teacher should divide his school into three groups: *Group I*, consisting of beginners and Grades II and III; *Group II*, of Grades IV, V, and VI; and *Group III*, of Grades VII and VIII. It is suggested that a regular time be set aside for the whole school to have a technical art lesson. In Minnesota, this time was found to be almost universally Friday afternoon.

Lettering charts needed.—To illustrate how the suggested plan can be carried out, let us assume that all the children in the school need help in lettering. The teacher should prepare carefully for the lesson. He will need to find a simple, clear type of letter with fundamental

CHART I.—ART INFORMATION NEEDED BY PUPILS IN A RURAL SCHOOL

	Color	Design	Drawing	Construction	Lettering
GROUP I. Grades 1, 2, and 3	1. Recognition of the primary colors: red, yellow and blue. Recognition of the secondary colors: green, orange and violet. 2. Understanding hue and value differences.	1. Order an essential. 2. Order is dependent on where we place things. 3. Feeling for balance, rhythm, and slightly for proportion.	1. At first no interest in even interpreting a drawing into real forms. 2. Later, symbols that stand for things. 3. Recognition of facts of form in nature.	Just feeling, punching fingers into materials. Later making many things using big muscles. In second and third grades decorating the objects constructed.	Recognition of letter forms. Later in drawing simple letters freehand on paper and on blackboard. Making words with correct forms.
GROUP II. Grades 4, 5, and 6	1. Recognition of intensity or brilliancy differences. 2. Learning the complementary colors. a. That they intensify each other b. Mixed they grey or dull each other	1. Center of interest in all arrangements. 2. Keep a few things well arranged for beauty.	1. Interest in making pictures look real. 2. Action in people and in animals. 3. Realistic shapes and colors for trees, buildings, etc. 4. Near objects, large; far ones, small.	Making one's own patterns and plans for constructing objects of use. Interest in pulling apart things to find how they work.	Cutting letters. Learning to space letters. Making labels, etc., with ½" letters. Making large letters for posters and signs.
GROUP III. Grades 6 and 7	Learning thru experimentation what hue combinations give pleasure. Finding the necessity for balance, proportion, rhythm, and dominance in color planning.	1. Application of rhythm, dominance, proportion, and balance to all school and life situations. a. Environment b. Clothing c. Personal expressions	Realism plus beauty of arrangement. Interest in correct detail.	More interest in making a useful object beautiful. Interest in making things socially useful to the group, such as school equipment.	Interest in designing with letters. Interest in quality in lettering. Making posters, signs, etc.

CHART II—A CHART FOR THE GUIDANCE OF RURAL TEACHERS IN THE TEACHING OF ART

A. Objectives, Interests, Materials, and Activities

General objectives	Specific objectives	Interests	Relation to other subjects	Suitable materials	Suggestive activities
GROUP I. Grades 1, 2, and 3 1. Tasteful environment. 2. Originality and self-expression. 3. Familiarity with beauty. 4. Cultural heritage. 5. Hobbies and leisure-time pursuits. 6. Art information and skills.	1. Familiarity with materials thru manipulation. 2. Enjoyment of color. 3. Recognition of primary and secondary colors. 4. Recognition of shapes of objects. 5. Expressing ideas.	1. Printing for fun. lines and scrawls at first meaningless to others. 2. Arranging toys, books, etc., in play and games. 3. Interpretation of stories thru dramatization.	1. Story reading interest. 2. Counting related to repeated arrangement of objects. 3. Costume and customs of other people. 4. History of Pilgrims etc.	1. Easel paint or calcimine, big brushes, news-print paper. 2. Colored chalk. 3. Colored paper. 4. Wax crayons. 5. Clay.	Modeling in clay. Playing tag with various colors on their back. Coloring stories. Arranging a reading corner with small chairs. Making, decorating, and arranging a play-house, second and third grade. Making movie, paper bag masks, or stick puppets. Painting freely. Drawing on the black board.
The same.	1. Thinking in terms of design principles. 2. Complementary colors. 3. Objects near appear larger than objects far away. 4. Representing people playing games.	1. Story illustration. 2. Making games. 3. Arranging one's possessions. 4. Making costumes, settings, etc., for dramatizations. 5. Realism in all forms of expression.	1. Stories, costumes of other lands. 2. Interiors and furniture of history. 3. Different kinds of scenery in different countries.	1. Opaque paint. 2. Colored chalk. 3. Crayons. 4. Clay. 5. Soap for carving. 6. Charcoal. 7. Weaving materials. 8. Wood.	Making illustrations of the stories read of facts of geography and history. Painting a large frieze for the schoolroom. Planning a school party, decorations for napkins, making favors, printing invitations. Dressing dolls. Making a flower garden. Modeling in clay. Making gifts.
The same.	1. To discriminate between good and poor arrangement. 2. To use colors harmoniously. 3. Draw objects correctly. 4. To make people do what they wish them to in their illustrations.	1. Design and construction, finding how things work, and why facts are so. 2. Making effective lettering. 3. Using drawing as a means to an end.	1. Geometric design as related to mathematics. 2. Making architecture attractive. 3. Historic architecture. 4. Buildings in foreign lands. 5. Beautiful books and how they are made. 6. Making toys.	1. Charcoal. 2. Cut paper. 3. Transparent and opaque paint. 4. Wood. 5. Carving tools. 6. Brush and ink. 7. Lettering pens. 8. Bookbinding materials.	Arranging furniture in schoolroom. Arranging books on shelves. Making reading charts and announcements. Making posters. Constructing easels for the beginners. Making a frame for bookbinding. Making attractive book covers. Rebinding schoolbooks. Making gifts.

GROUP II. Grades 4, 5, and 6.

GROUP III. Grades 7 and 8.

CHART II—A CHART FOR THE GUIDANCE OF RURAL TEACHERS IN THE TEACHING OF ART — *Continued*

B. Resultant Knowledges, Appreciations, and Skills

Characteristics of the accomplishments	Appreciation	Expression	Information	Technical skills
GROUP I. Grades 1, 2, and 3 In painting, many lines look aimless to the adult; these will gradually begin to have more organization and to be symbolic of the things the child is trying to say. Encourage him to gradually see form. He will probably begin to desire realism toward the end of the third grade. Stress action in picturing people.	Beauty of rhythm especially a feeling for joy in seeing repeated lines and colors. A feeling of pleasure in a bright colorful painting or industrial object.	Free manipulation of materials. Making clay, paints, and chalks express ideas.	This will be of two types: information concerning color, design, form drawing, construction, and letter forms; but always tied to information related to the home, play, or something studied at school.	1. How to keep paint from running all over. 2. How to make clay stick together. 3. How to mix colors to produce a variety of hues. 4. How to care for materials.
GROUP II. Grades 4, 5, and 6 Pictures expressing action will appear lifelike even tho crude and imperfect. Pictures should show growing realization that objects near appear larger, than objects far away. In color, use of complements will lead to use of some color that is greyed.	1. Understanding the tools of representation with which the artist creates pictures and sculpture. 2. Understanding the meaning of design. 3. How the use controls the decoration of objects.	1. Ability to make one's drawing look like the object represented. 2. Ability to arrange objects to express one's ideas of beauty. 3. Ability to make a pattern of one's own.	1. Division of a ray of light into the color spectrum. 2. How to produce repetition alternation contrast, etc., in his design. 3. How to make things far away appear small.	Drawing knowledge is of greater interest to the child in this period than design. Individual skilful drawing of interest. Realism of proportion in the human figure.
GROUP III. Grades 7 and 8 Design or arrangement is most important phase in the work of these grades. Children's work shows a growing knowledge of balance, of the use of rhythm and dominance, and of a finer sense of proportion. In drawing people, a greater sense of true proportion. In drawing, an appreciation of residence and color harmony.	1. Ideals of good craftsmanship. 2. Recognition of quality in works of others. 3. Seeing art as a part of all living.	Freedom to use color, design, form drawing, construction, and lettering as tools of thinking. To make a mental conception take tangible form in clay, wood, etc.	1. More knowledge of the theory of design which shows in beautiful arrangements. 2. How to make a color harmonize with another color. 3. How to make figures in proportion. 4. Facts of letter structure.	How to use paint, ink, charcoal, as tools of graphic expression. How to draw objects correctly in perspective. How to arrange the parts of a poster. How to bind a book. How to construct toys, equipment, etc.

form. Letters with the same proportions as those of the Roman alphabet found on the Trojan column are useful. These may be simplified by omitting all serifs and by making them the width of the chalk, charcoal, or pencil as drawn on blackboard or paper.[5] Care should be taken to choose a letter that is simple, well proportioned, and of pleasing form. It is helpful to use sheets of brown craft paper about one yard in length and twenty or more inches wide. Fold the sheet in the middle. On the upper half draw the alphabet forms with a single stroke of a wax crayon three-quarters of an inch long, used broadside. Make the letters five or six inches high so that they can be seen across the schoolroom. Usually it takes four such sheets to complete the alphabet. Then pin these charts along the blackboard. On the lower half draw the same basic forms, but increase the width of the strokes to a proportion suitable to poster work. The lower half can be folded out of sight except when children are using block letters for poster work. These letters are not used as models to copy, but merely to assist children to see the forms and to learn their proportions. A discussion of the shapes, proportion, and method of making each letter should always be followed by practise in printing actual words rather than by making isolated letters A, B, C, etc. HIT is an easy word with letters that are all straight forms. Usually this can take the form of a game, the children suggesting words, one child spelling the word, and the teacher making the word and then quickly erasing his word while the children make the same word.

Sometimes it is a good plan to follow this lesson with a word game, insisting on good printing forms at all times. One period could be devoted to such a lesson with the whole school at work. The beginners would be using large pencils and paper, or preferably chalk on the blackboard, so that the teacher could see if pupils were able to make the forms. The second group could print simple words, using pencils; the third group, with round nib pens and ink.

For a second lesson it is suggested that the following applications be made: the beginners make A, B, C books; the second group letters Christmas cards; and the third group makes posters and announcements of school events. By following this plan the teacher makes only one preparation of illustrative material and minimizes confusion by keeping her entire group at work with similar subjectmatter. The media, objectives, and applications vary according to the ability, age, and interests of the children.

The following suggestions are given to teachers working out such a plan as described above:

[5] Such an alphabet appears in *I's and Q's*. Sallie R. Tannahill, Garden City, N. Y.: Doubleday, Doran and Co., 1932. p. 5. [6] *Writing and Illuminating and Lettering*. Edward Johnston. Toronto: Pitman Co., 1925. Appendix, p. 433-35. [7] Also appears in many drawing books.

1. Present subjectmatter all related to one topic on a given day, but divide it into three lessons, each distinct in subjectmatter, application, and kinds of materials used.

2. Plan, if possible, for some illustrative material which will develop appreciation in relation to the same topic you are developing for information and technical skill. Never leave the illustrative material up, or children will copy. Copying fails to develop initiative, originality, memory images, and imagination.

3. Plan for an evaluation or enjoyment period for the completed work at the end of the lesson. Always choose the most satisfying work. Point out successes, never failures, in expressing thought successfully.

4. Build technical lessons in figure drawing, lettering, color, design, and craft processes on definite interests and a feeling of necessity for help on the part of the children.

5. Success calls for: (a) enjoyment; (b) improvement in ability to express thought, in use of materials, in ability to design, use color, draw and construct letters; and (c) desire for more instruction.

6. Art is more than drawing. Art is a part of everything we do: the way we arrange our schoolroom; how we mount materials for display; the colors and lines we choose in our clothing. These opportunities should be used for teaching principles of beauty: namely, balance, rhythm, dominance, and proportion.

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Chapter II

HEALTH PRACTISES AND TECHNICS

Vivian V. Drenckhahn and Ruth E. Grout[1]

THE PRACTISE OF TEACHING HEALTH thru real experiences is becoming countrywide. Texas recommends "that the health education work be placed on an intelligent basis with the student from the beginning. This method does not place a value on giving awards for health practises, using personification, or placing emphasis on health jingles or plays. Instead, the teaching procedures emphasize real life experiences based on the natural interests of the child."[2]

Modern courses of study emphasize the need for health education to function as a program of living. In the material from New Hampshire we note "the measures of attainment cannot be found in the records of written examinations but in the attitudes of the children, their vigor and freedom from mental and physical defects, and their health practises."[3] Various problems which confront the teacher in building such a health education program will be considered in the following pages.

FINDING THE NEEDS AND PROBLEMS OF CHILDREN

In health education a first and most important step for the teacher is to find the existing needs and problems of the pupils. These needs are revealed primarily thru a study of the children and their environment. The findings of the health examination, observations of health practises and of social and mental adjustments, discussions with parents, the causes for school absences, a study of local morbidity and mortality rates, and a review of health knowledge tests will present a picture of health needs around which activities can be organized.

Simple daily observations of incidents occurring when the child is at work or play, or anecdotal types of stories, are a means of recording his interests and problems as well as of indicating trends in his development. Such observations, with the data on cumulative records, are of great value to teachers in understanding the child and in guiding his daily activities. Recordings may be made in a notebook, in which space

[1] The writers gratefully acknowledge the excellent response to letters requesting information on health activities in rural schools from state education supervisors and directors of health organizations in thirty-nine states. This chapter reflects the health practises and technics outlined in these reports.

[2] *Tentative Course of Study for Years One Through Six*. Austin, Texas: State Department of Education, 1936. p. 409.

[3] *Program of Studies*, Recommended for the Elementary Schools of New Hampshire. Concord, New Hampshire, 1930. p. 300.

school building and equipment, the school program, and the health examination. The section on lighting will illustrate the type of questions asked:

Are windows on one side of room?
Is window glass area 1/4-1/5 of the area of the total floor space?
Are windows provided with two shades, adjustable from center of window?
Are shades translucent and buff colored?
Are shades adjusted during the day to allow the most light to enter?
Are seats arranged so light comes chiefly from over left shoulder (except for left-handed pupils)?
Are ceilings and walls light in color?
Is finish on walls, ceilings, blackboards, and furniture dull?
Does school have electric lights?
Is illumination on dark days sufficient in all parts of the room?

A complete "School Health Inventory"[7] which is used twice a year was prepared in Cattaraugus County, New York. This inventory, as well as the Erie County checklist, is planned on a three-year basis so that progress can be noted from year to year. The "Self-Survey of School Conditions" (Circular No. 65) compiled by J. F. Rogers, United States Office of Education, contains similar material which has been widely and effectively used.

THE SCHOOL ENVIRONMENT AND ITS USE

The school building and playground, when carefully equipped and used in terms of healthful living, contribute to the happiness and health of children. The classroom should be large enough to house the pupils adequately. Seats that can be adjusted to the size of the pupil and moved to allow participation in a varied program of activities add to both comfort and health. Sanitary drinking and hand-washing facilities are essential in preventing the spread of communicable diseases. Teachers should make certain that drinking water is safe at its source by arranging with the health department for the regular testing of water. A sanitary drinking fountain is one in which the spray is forced from the side. This prevents the child from touching the nozzle and prohibits a backward flow of water when the pressure is released. When there is no running water in the school, individual drinking cups and a covered container equipped with a faucet are desirable substitutes. Individual paper towels, soap, and warm running water are required for satisfactory handwashing. In a well-organized school it is a simple matter of routine to wash hands before eating and after using the toilet. Teachers in New Jersey[8] and Connecticut[9] report that hand-washing

[7] Grout, Ruth E. *Handbook of Health Education*. New York: Doubleday, Doran and Co., 1936. p. 35.
[8] *Cleanliness* material from Warren County Public Schools.
[9] *The Hot Lunch*, a mimeographed report from a Connecticut one-room school.

is facilitated by organizing a committee of pupils to assist in pouring water, dispensing soap, and distributing towels. Water is warmed by placing it near or on the heater.

Toilets should comply to standards outlined by the health department. In some states indoor toilets are required by law. Every toilet should be clean, light, free from odor and markings, and supplied with tissue. Fitted covers and screens on windows are important.

Adequate lighting prevents eyestrain and fatigue, and promotes general health. Some requisites for good school lighting include window area and artificial illumination conforming to standards, walls and ceilings painted a light color, and buff translucent shades adjustable from the center of the window.[7] Plants on the window sill, decorations on the window pane, curtains, shades improperly adjusted, and reading table or desks in dark corners prevent children from securing needed light.

Maintaining good ventilation and an even temperature is a cooperative enterprise in which the entire school personnel may participate. If a plainly graduated thermometer is placed at the desk level, away from doors and windows, the temperature surrounding the children is known. A range between 68 and 70 degrees is more readily maintained if a pupil committee regularly records the temperature so that adjustments can be made in the heating and ventilating system. Classrooms with window ventilation only should be thoroly aired by opening wide the windows and doors during recess periods and the noon hour.

Additional environmental factors that promote health are: screens on windows and doors, a place to dry wet clothing, a corner with simple equipment for the preparation of hot lunches and the storage of lunch boxes, and a place where younger children may rest.

Teacher, pupils, and janitor together can work out plans whereby lavatories, toilets, drinking water containers or fountains are always kept clean. In some schools janitors are provided with special instructions relating to their responsibilities toward school health.

The school environment may be the source of many educational experiences and also may stimulate the formation of desirable health practises. For instance, units on "Making the School a Safer, Cleaner, and More Attractive Place to Live" are suggested in the South Carolina Health Education Bulletin,[8] while North Carolina teachers developed a unit on "Using the Sanitary Facilities in the School."[9]

[7] Hathaway, Mrs. Winifred. *Lighting the Rural School*. New York: National Society for the Prevention of Blindness, 1935. [8] Smith, Mary Emma. *A Program of Eye Health in a School System*. New York: National Society for the Prevention of Blindness, 1934. 14 p.
[8] *Health Education*. Elementary School Manual Series, Bulletin II. Columbia, S. C., 1936. p. 30.
[9] Mimeographed material distributed by the State Department of Public Instruction, Raleigh, N. C.

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Individual differences of a physical, mental, or emotional nature must be recognized in planning the school program. The length of the school day, the number of recess periods, the nature of the noon hour, the type of schedules for different age groups need to be in accord with our knowledge of child development.

In an informal activity program there is flexibility for meeting pupil needs. Children are free to move about and they are given opportunities for self-expression, independent action, and cooperation with the group. Work, play, and rest periods are interspersed thru the day.

Play is the inherent right of every child. A mid-morning and an afternoon play period prevent fatigue and aid development. Play should be out-of-doors in the fresh air whenever weather permits, even tho it requires extra time to put on outdoor wraps. In communities where distance, or other factors, makes it impossible for the younger children to leave school early, it is well for the teacher to arrange for longer rest and play periods, thereby shortening the work period. Children who have an early breakfast or who for other reasons need extra nourishment require a mid-morning or mid-afternoon lunch. Crackers and milk, fruit juice, or fruit are desirable foods for this extra lunch.

The Nebraska Health Education Course,[17] suggests that school work assigned to elementary-grade children for study at home may be detrimental to the child's health. In Nebraska, as in many other states, the teachers are asked to allow time for children to prepare work in school rather than to assign home lessons. Poor lighting, lack of a quiet place to study, and poorly assigned lessons and fatigue, cause problems which may result in emotional disturbances and poor study habits.

Starting the school day—The way in which the school day starts has an influence on the program of the whole day. At that time, joyous, happy attitudes are built or destroyed. Attention must be given to the physical condition of each child to assure his readiness for the day's work and his freedom from diseases which might harm others.

The wise teacher will make it her daily responsibility to observe each child unobtrusively for signs of communicable disease before he has had a chance to mingle with other children. In some areas, such as the state of Utah[18] and Placer County, California,[19] the teachers are furnished with instructions for this morning inspection. The morning inspection period is used to check health habits, also. Experience is showing that good habits are better developed thru providing opportunity and encouragement to perform them than by using points and

[17] *Course of Study for the Elementary Schools of Nebraska.* Lincoln, Nebr., 1936. p. 423.
[18] *What the Teacher Can Do To Promote Health and Physical Education in the Elementary School.* Salt Lake City: Utah Department of Public Instruction, 1936.
[19] Letter from health supervisor to teachers.

prizes. It is more effective to have an attractive, well-equipped place for the children to tidy up before school starts than to set up a competitive checking system of habits performed at home. Some children do not need such a check, while many who need it feel resentful or embarrassed, and are tempted to tell untruths when placed in unfair competition with others.

If some form of record or reminder is preferred, a successful procedure is to allow each child to keep his own, checking only those habits which he himself decides need attention. Home cooperation and a well-motivated educational program will help solve many of the problems which arise in the morning inspection period.

The noon hour—The noon hour, one of the child's daily experiences in school, can make an outstanding contribution to healthful living. Most rural children have an active and long day with chores, home duties, and distance between home and school necessitating an early rising hour. The nutritive requirements for active, growing children are high. For these reasons, it is important that parents, teachers, and children work together on noon-hour plans. When carefully arranged, in addition to meeting the broader physical and social needs, the pupils themselves will feel refreshed and prepared for the afternoon's session.

A well-selected lunch, eaten slowly in a pleasant environment, is ideal for all children. Washing hands before eating, engaging in interesting conversation, and practising good table manners are acquirements incidental to the noon lunch period. Children need at least twenty minutes for eating lunch. Such desirable foods as milk, sandwiches, vegetables, or fruits are included in an adequate lunch. If a lunch is carried to school, every effort should be made to supplement it with at least one hot dish. Warm food stimulates digestion and makes a lunch more appetizing. The hot dish should be simple to prepare and suitable for all age groups. It will help greatly to meet the nutritive requirement of children when made with such protective foods as milk and vegetables which are apt to be deficient in a rural diet. Much can be done thru good planning. Over 75 percent of the teachers in rural schools of Madison County, Kentucky,[16] reported a hot school lunch.

Bulletins on the organization of a hot lunch and the equipment necessary for its preparation may be secured from the United States Office of Education,[17] departments of education,[18] and colleges of home economics.[19] In those larger schools provided with a cafeteria the manage-

[16] *Plan for Health Education and Hygiene in the Rural Schools of Madison County*, 1936-37. (Mimeo.)

[17] Fisher, K. A. *The Lunch Hour at School*. No. 7, Health Education Series. Office of Education, Dept. of the Interior, Washington, D. C., 1920.

[18] McCormick, M. G. *The Rural Hot Lunch as a Health and Social Activity*. Albany: University of the State of New York, 1931. 19 p.

[19] Roman, N. McNeal. *School Lunch and Breakfast for the 4-H Club Girl*. New York State College of Home Economics, Ithaca, N. Y., 1928.

ment should be on a non-profit basis. If the manager is not trained in home economics, a home economics teacher should supervise menu planning and the buying and preparation of foods. Excellent work in supervision of county school lunchrooms was reported from Jefferson County, Alabama.[35] Lunchroom standards were raised thru helping managers to see their responsibility to furnish children with one of the main meals of the day.

HEALTH PROCEDURES

Weighing and measuring.—Growth is one sign of health. It is influenced by the many factors that affect health, especially nutrition and sleep. Weighing and measuring have wide educational value, particularly when carried out at regular intervals by teachers and older pupils. The county health supervisor of San Joaquin County, California, reports that most rural schools possess scales and that children are weighed monthly, with emphasis placed on growth rather than upon a particular height and weight at any given time. This is becoming common procedure in schools today. Emotional disturbances are lessened when emphasis is placed on growth rather than conforming to a "standard" that often does not fit the child. Normal children may show some intermittency (a period of non-growth) in growth. Recent research[36] indicates that failure to gain weight for three successive months is the best growth criterion for selecting children who may need special attention.

Rest and relaxation periods.—Physical and mental relaxation for short periods during the day restore energy and prevent overtiredness. Fatigue may be indicated by inattention, tenseness, irritability, listlessness, or other forms of behavior. Ideally, periods of activity should be alternated with periods of relaxation. Sometimes children do not know how to relax. They will learn best thru practise and by realizing that complete relaxation means limpness, the opposite of tenseness and effort.

During periods when the body has maintained the same position for some time, a change to more vigorous activity will prevent fatigue. All children, particularly those in the younger age groups, may need a complete rest period in the middle of each school session in addition to the rest period following lunch. There may also be a few children, such as those returning to school after an illness, who need rest more than activity. Schools in several states provide a separate room where longer rest periods may be had. Younger children rest better if shades are drawn, shoes are removed, and if each child has a pad on which

[35] From the *Annual Report*, Jefferson County, Alabama, Health Department, 1936.

[36] Turner; Longee; Sarabia; and Fuller. "*Rate of Growth as a Health Index*." *The Research Quarterly in Health and Physical Education*, Vol. VI, No. 3, October 1935.

to lie. Pupils in an Alabama school[37] made comfortable rest pads which are used by both teacher and pupils. Older children may relax by placing heads on desks, listening to music, or playing quiet games. Teachers themselves might take more time to rest if they realized that relaxation lessened their own irritability and tenseness, which in turn is often reflected in the children.

Health protection—Altho health departments generally are in charge of disease control they cannot work effectively without the help of the schools. On the classroom teacher, especially in rural areas, rests the task of recognizing early symptoms of disease, excluding a child when necessary, and reporting the case to health authorities. The part he can play in a preventive program is even more far-reaching. In regions where facilities are available to school children for immunizations, or for tuberculin testing, his assistance is invaluable in educating the child and his parents so that they will understand the importance of and desire the services. The groundwork for disease control can be laid in the daily life at school by the solving of problems dealing with hygienic living practises and a safe environment. The superintendent of Saginaw County schools, Michigan, reports health units on the fly and diphtheria control that were worked out by teachers in connection with the community health program.

Detecting and correcting physical defects—Thruout the country there is a growing realization of the teacher's importance in working for physical fitness in school children. Regardless of the way in which health examinations are given, the teacher is in a front line position to recognize defects and, in cooperation with the school nurse, to work for their correction.

In some areas the teachers themselves, after instruction, make the tests for vision and hearing as a part of their educational program. The teacher often is able to notice abnormalities in children which he may call to the attention of the physician or nurse. In this connection, he will find most helpful the pamphlet, *What Every Teacher Should Know About the Physical Condition of Her Pupils*.[38]

The correction of defects involves the cooperation of parents and the medical and dental professions. It is closely related to economic and social conditions sometimes beyond the teacher's immediate control. However, the teacher can, and often does, bring together these various groups into a functioning organization for obtaining corrections. When a sound educational program goes hand in hand with the correctional program the results are more permanent and effective.

[37] Staff of the Wilson Dam School. *Health Teaching Through Life Experiences*. 1937. (Unpublished.)

[38] Rogers, J. F. *What Every Teacher Should Know About the Physical Condition of Her Pupils*. U. S. Dept. of the Interior, Office of Education. Washington, D. C.: Government Printing Office.

The physically handicapped child—Much interest in the physically handicapped child in rural areas has been aroused in recent months thru the provision of federal funds to meet this problem. Special classes or home instruction for the badly crippled, blind, deaf, or children otherwise severely handicapped are being developed.

Those with minor defects can be helped at school by attending to their special needs. If every child poor in vision or hearing were given a seat where he could follow the school work better or were given intelligent, sympathetic guidance, there would be fewer school failures today and more useful citizens tomorrow.

THE INSTRUCTIONAL PROGRAM

"Health instruction is that organization of learning experiences directed toward the development of favorable health knowledge, attitudes, and practises."[24] The instructional program touches upon all phases of child life. The child's environment, his daily activities in home and school, the services for his health protection, and his health problems both as an individual and as a member of the community, are significant factors to draw upon in health teaching.

Emphasis in the elementary grades is directed toward the formation of health practises and appreciations. As children advance in the grades, knowledge in relation to behavior becomes increasingly important. Teaching should be based on scientifically true facts and adapted to the child's ability to use and understand these facts.

Activity programs organized around child interests necessitate the integration of all fields of learning, including health. Work in social studies and science often relates to problems in living in which health may play a vital part. The large comprehensive teaching unit presents opportunities for making natural and fundamental health integrations.

There are many classroom situations that occur in which health can be taught incidentally. Such an occasion may arise in equipping or using the first-aid kit. In Orange County, Florida,[25] every Negro school has a first-aid kit, and teachers are supplied with instructions as to its use. Similar opportunities may occur in such other situations as in discussing the hot dish for the noon lunch, in planning the school party, or in arriving at school with wet shoes.

Health principles may also be developed thru activities and units in which health receives major emphasis. The organization of the health unit around everyday health problems is reported from many sections.

[24] From the Report of Terminology Committee of the Health Education Section of the American Physical Education Association. *Journal of Health and Physical Education*, December 1934.

[25] Taylor, K. B. *School Health Objectives and Problems in Orange County, Florida*. 1930. (Unpublished.)

We note in a North Carolina report, "practically all schools study their water supply and waste disposal systems. Excursions to neighboring markets, farms, dairies, lumber yards constitute regular experiences."[26] In Negro demonstration schools near Nashville, Tennessee, children studied the value of different foods in the diet, planned and prepared simple meals, set the table correctly, and practised good table manners. This school program influenced "the diet in the home, especially in the increased use of milk, fresh green vegetables, and cereals."[27]

In developing the program a special time is usually set aside once or twice a week to report on activities, to discuss a problem being solved, or to plan new units of work in personal, school, or community hygiene. The grouping of grades allows more time for individual guidance, enables the group to develop larger units of work, and makes possible a more thoro treatment of problems. In Cattaraugus County, New York, problems and interests relating to the general theme of growth and to the general theme of a healthy individual in a healthful community are grouped for rotation on a two-year basis "in order to assure continually fresh approaches to fundamental health problems."[28] This plan is made to function in a flexible way so that immediate health problems and interests may be met as they arise.

Visual aids, including slides, movies, and construction work, are becoming more widely used as their educational value is recognized. A museum of health started in a class or school is one means of visual education and tends "to encourage creative ability among young people and at the same time to develop an appreciation of modern health practises."[29]

Unit teaching requires and stimulates the use of numerous reference books. A variety of books are preferred to the use of one text. Fortunately, there are a number of health books on the market today that have been written by authorities in the field of school health education. With so much false and misleading health information current, every school should have a reliable source of information for children.

HOME, SCHOOL, AND COMMUNITY RELATIONSHIPS

A successful school health program reenforces and continues the health teaching already initiated in the home and community. It enlists the active participation of parents and community groups in order to

[26] McDougald, J. *Newer Methods of Instruction Health Education.* Raleigh, N. C.: State Department of Public Instruction, 1937. p. 4. (Unpublished.)

[27] Bent, M. J., and Greene, E. F. *An Experiment in Health Education.* Fisk University, Nashville, Tenn. 1937. (Unpublished.)

[28] Grout, Ruth E. *Handbook of Health Education.* New York: Doubleday, Doran and Co., 1936. p. 13.

[29] Williamson, P. B. *Visual Education for Schools.* A paper read at the American Public Health Association Meetings, October 1937. New York: Metropolitan Life Insurance Co.

plan for daily activities that promote the maximum health and growth of the individual child. In Erie County, New York,[32] as in many other places, the cooperation of these individuals and groups is considered necessary to the health program.

When parents are present at the health examination, the educational value of the examination is increased and greater responsibility in parents for the correction of defects is developed.

In Virginia[33] every classroom teacher has a box file of health literature which is used as a circulating library for parents. School authorities, parents, and various social agencies organize adult study groups which include discussions of child health topics.

Many parent-teacher associations annually conduct a Summer Round-Up for children about to enter school. This stimulates parents to have their children examined and to attend to the correction of physical defects. Tuberculosis and public health associations in many states have on their staff persons trained in school health education who assist educational authorities in the school health program. In Arizona, thru the initiative of the State Education Department, all community groups were organized to observe Child Health Day and to promote a year-round program.

The school may serve as a community center as in the case of the Indian day schools. In these schools "educational opportunities are brought to the adult as well as to the child, and the entire community is linked together in one program for the improvement of home, the promotion of health, and for economic betterment."[34]

ADAPTING HEALTH PROGRAMS TO LOCALITIES

The different regions of the country, as well as various racial and economic groups, present their own peculiar health problems which must be recognized and met. For instance, malaria, hookworm, and pellagra are prevalent in various sections of the South, while trachoma is common in some sections, especially among Indians and mountain people. Tuberculosis leads all other diseases as a cause of death among the Indians and Negroes, and is high among Finns in northern Michigan lumber camps.

Reports from different sections of the country show growing recognition of the importance of adapting health programs to local conditions. In a comprehensive study of "persistent problems of life" in Bulloch County, Georgia,[35] the teachers found as major health problems dental

[32] *Cooperative Activities for Healthful Living in Schools in Rural Communities.* Buffalo Tuberculosis Association, Erie County, New York, 1936.

[33] Graves, E. V. *Report of Health Education in the Virginia Education Program.* Richmond, Va.: State Department of Public Instruction, 1937. (Unpublished.)

[34] Gerken, E. A. *Health Education Among Indians.* U. S. Office of Indian Affairs, Washington, D. C., 1937. (Unpublished.)

[35] Franseth, J. *Health Program in the Schools of Bulloch County,* 1936-37. (Unpublished.)

defects, malaria, and hookworm infection. Each was attacked in the proper manner. For instance, the children began a study of hookworm and its effects on health. Treatments were given, and thru the cooperation of parent-teacher associations and other organizations an intensive and successful program of building pit toilets was carried out.

The Board of Health of Tulare County, California, reports emphasis on trachoma prevention and treatment. A unit on "A Sanitary Kitchen" worked out by a Louisiana Negro teacher,[*] suggests such activities as making sanitary garbage containers out of lard cans, and sealing kitchens with corrugated cardboard.

Teacher growth thru participation—Since much of the responsibility for the satisfactory functioning of the health program in a school rests on the classroom teacher, his training and continued growth in this task are of great importance. A teacher does not need to be a specialist to play a successful role in health education. He should, however, possess an understanding of the factors which aid child development; a scientific knowledge of hygiene and sanitation; a vision of what needs to be done, as well as a desire to do it; a few fundamental technics for bringing about changes in behavior; and an expansive, wholesome personality which reflects the principles for which he stands.

Obviously such an ideal cannot be attained in any short period of training. It is a matter of growth thru many and varied experiences. When daily experiences are supplemented by participation in study and discussion groups, professional reading, and now and then a "refresher" course, perspective is gained and progress becomes inevitable. A few pitfalls can be avoided by the teacher in service if he occasionally evaluates his health teaching by some objective scale. There follows an outline of contrasts in health teaching activities[**] which may aid him in this checking:

I. Important areas of knowledge, habits, and attitudes are emphasized.	I. Emphasis is placed on unimportant or even undesirable habits, attitudes, and knowledge.
II. Real situations and health problems are used as content of instruction.	II. Health is taught by means of artificial situations, such as posters, plays, and stories which have little or no relation to the study of real problems.
III. Attention is given to individual health needs and abilities, child initiative and originality.	III. Attention is given to relatively unimportant or traditionally accepted health needs of individual pupils.

[*] Taken from mimeographed bulletin of health units prepared by Curriculum Laboratory, Department of Health Education, Louisiana Rural Normal, Grambling, La.

[**] This has been adapted from evaluation material prepared by Ruth Strang, Teachers College, Columbia University, for use in Cattaraugus County, N. Y.

IV. Highest levels of motivation are used, such as interest in a solution of a problem, satisfaction in an activity itself, best individual development, and social service.	IV. Artificial devices and extrinsic rewards, such as stars, prizes, and other forms of competition are used for motivation.
V. Health education appears to permeate in a subtle way the entire school program.	V. Health is related to other subject-matter fields, such as science and social studies, but only slightly or in an academic way.
VI. A maximum of home cooperation is sought and secured.	VI. Little effort is made to obtain home cooperation.

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Office of Education, United States Department of the Interior, Washington, D. C.
State Department of Education.
State Department of Health.
United States Department of Agriculture, Washington, D. C.
United States Public Health Service, Treasury Department, Washington, D. C.

Chapter III

INSTRUCTION AND ACTIVITIES IN THE LANGUAGE ARTS

Roberta LaBrant Green

THE PROBLEM of developing language arts is essentially the same for children in both rural and urban communities. There was a time when life in the country or the small town, by its very nature, demanded less use of language as a means of acquiring social understanding, because of the independence of life there. Now the rural dweller has a greater need for understanding the rest of the world.

Changes in manner of living have increased the need for language as a means of self-expression. Today the child or adult in a rural community has the same ready-made entertainment and the same encouragement to engage vicariously rather than actively in most of the so-called amusements as do those persons living in cities. From the standpoint of expressive activities, living is much the same in urban and rural communities, and whatever the problems of developing a language arts program in schools may be, they are largely identical for all groups of children.

With the development of a new philosophy of education during the last two decades there have arisen many new terms. *Language arts* has supplanted a number of terms formerly common, such as *English, composition and rhetoric, reading, formal and functional grammar,* and *the classics.* Let us see what this new term implies.

Language serves the child or the adult in three ways. It is his tool for learning, either by reading or listening, for thinking, and for telling. It is an important means for acquiring social understanding and for self-expression. It is not his only means for either of these ends, but it is one that every normal person has at his disposal and one in which he acquires great skill at an early age.

Vocabulary at six—When the young child enters the first grade he has already acquired more skill in his use of the vernacular than years of adult study of a foreign language will achieve. He has a vocabulary of perhaps twenty-five hundred words, far more than the average adult uses in an ordinary day's experiences. He can use these words in sentences of great complexity. He says, "I will go if you want me to," using with ease the complicated infinitive clause, the correct case forms of pronouns, the irregular verb, and those connectives so difficult to explain, the preposition and the subordinate conjunction. He can use verbs in most of their tenses without difficulty, he gets his tense sequences correct for the most part, he is a past-master at

distinguishing between active and passive meanings, and he makes use, without thought, of the intricacies of English word order. Not only is he able to use his language in this fashion, but he takes pleasure and satisfaction in doing so. He talks of what he has done and seen, of what he is going to do, of what he likes, and, in fact, of all the experiences, real or imagined, that he has had. He talks because he wants to say things, and he wants to say things because he has had experiences that have meaning to him. That he has already acquired great skill and satisfaction in using language for self-expression cannot be denied.

This use of language is not his only one. It is an obvious evidence of other ways in which it serves him. He thinks in terms of language, and he does this because he has learned to understand it. All the complicated sentences he makes have had their beginnings in what he has heard. Moreover, in all probability this six-year-old has had experience with a more formal kind of language use, reading. He has had stories read to him, has seen his parents read letters, and perhaps has received and "written" (by means of dictating to an older person) letters of his own. If he has normal curiosity and has had some encouragement he may have learned to read "Stop" on the highway, and he may have learned to recognize his own name in writing. Up to the time he enters school he has a feeling that reading has meaning; it tells him what he wants to know. The four-year-old who cried because he was the only one in the family who could not read may have been unique in his grief, but he was exhibiting a feeling that is probably common to most children entering school, that reading is a way of finding out things one wants to know.

All of this learning has been a natural process, based not upon what adults think the child will need to know at some future time but upon the child's own needs as they have grown out of his experiences. He has been happy in the learning and in the using of language. These free, meaningful experiences with the vernacular may well be considered a key to the meaning of the term "language arts." This implies far more than facts about language, such as how to read, to spell, to write correct sentences, or to pull them apart to see how they are constructed. These are merely skills which may or may not be needed for the meaningful use of the mother tongue. The art of using language properly for understanding the world about one thru listening, reading, and thinking, and for expressing one's own feelings and thoughts in both speech and writing is a broader concept than that implied by the conventional list of items referred to above. Moreover, the manner in which the child entering school has acquired his skill in language and his attitude toward it offers an excellent basis on which to build language arts in the school program. To stifle his enthusiasm for self-

expression by telling him what to talk or write about; to attempt to teach him to read before he senses a need for finding out things from books; to insist that he write before he needs to make written records for himself or other persons; and to superimpose any kind of language activity without meaning to the child is worse than useless, for it is deliberately defeating the purpose of language teaching and crushing the natural spontaneous use of language, which is necessary to growth.

THE LANGUAGE ARTS AS A MEANS FOR UNDERSTANDING THE WIDER WORLD

Certain agencies, such as the radio, the motion picture, and the newspaper, tend to bring the rural child closer to the lives of the people in cities, but these agencies often give a distorted view and are at best poor substitutes for first-hand contact. He becomes increasingly dependent upon other people, and hence needs a more thoro understanding of his own problems and those of other industrial and social groups. He needs to grow into a person who senses first the problems and possible solutions of his own community, and then those of the world beyond his immediate environment.

INTEGRATION WITH OTHER SCHOOL SUBJECTS

Language arts based upon problem solving implies, of course, the interrelation of social studies, science, music, art, language, and, in fact, all so-called specific subjectmatter areas. The modern school accepts this implication. To separate language teaching from other phases of the school program is artificial. To make it an integral part of a problem-finding-and-solving program is to take advantage of the best information we have about the psychology of language development. The problem must be one of immediate concern to the child, however. If it is, no matter what his age level is, there will be abundant need for using all language activities.

Language use in primary grades—In the lower primary levels there will be much telling of experiences, especially in terms of what the children have seen and of what they are doing. Dramatic play will be an important form of language use, and can readily lead into rhythms and music. There will be need for making lists of things to do and materials needed for the children's own memoranda. Names of persons in the group who have certain responsibilities will be another need for simple writing and reading. Notes of thanks or other written communications to helpers in the school program not immediately in the school will call for simple correspondence, dictated by the children at first, and later written by themselves. By means of a problem closely involving the children themselves, such as how the family works together, or how people in the community help each other, there can be

built up reading and writing readiness and all forms of self-expression, all of which are basic to language arts.

In the lower elementary levels the problem approach will broaden still further the child's outlook and understanding of the world about him. Language needs will likewise grow in kind and skill. Here such a question as the importance of water to man, the service that trees and forests render and man's use of them, or what becomes of the products of the farm are challenging questions, appropriate to children of a rural community. From the standpoint of language arts they call for increased reading for definite purposes, for clearer discussions, for reading stories and poetry related to the problem under consideration, for simple organization of information found and subsequent written records of it, for dramatization, and for all kinds of oral and written accounts of personal reactions to the problem at hand. If the problem is one of real concern to the child in his present situation, there will be an abundance of language needs. If, on the other hand, the question for study is something entirely unrelated to him, such as life in Europe in the Middle Ages, language activities as well as everything else involved in the study will be superimposed and hence will lose much of their significance.

In upper grades—Slightly more complicated questions for large units of study, such as how food and clothing are provided, how man depends upon animals, what the city and country do for each other, and other units which gradually expand the child's horizon will call for increasing language activities. Reading will become more important as a source of information, and writing, story-telling, and dramatization will take more definite form. Group planning and exchange of information will provide for oral expression, clear thinking, and attentive listening.

As children advance to upper elementary-grade levels still broader concepts and a larger world open to them. A study of how man has achieved his present status in traveling from place to place; how he has learned to make written records which make possible reading materials available today; how he has learned to make and use machines and what they do for him—these and many others which show the stream of man's progress up to the time where the children of today join it and the general direction in which it appears to be moving will be of vital concern to children in the upper elementary grades. A more complicated study such as these suggested here will call for increased language skills of all sorts. Dramatization, oral discussions, group planning and evaluation, reading, listening, writing of all kinds—in fact, every kind of language use will be needed. Individual reading will take children to foreign places and other times and will give them a better understanding of the world in which they live.

In high school—If such a program can be carried into the high school, whether the various school areas are wholly integrated or treated as separate subjects, increasingly more complex language needs will arise. A program of skills based upon needs arising from problem-solving experiences is sure to provide justifiable teaching materials.

THE NEW APPROACH TO LANGUAGE REQUIRES NEW TEACHING MATERIALS

This new approach to language teaching calls for new kinds of materials and for richer experiences. It cannot be done with a single text for reading and one for composition.

Trips—One type of experience which every school should make use of is first-hand investigation thru trips. This is more difficult for the rural school in some ways than for that of the city, because it is farther removed from the centers of industry. However, there are many trips within easy reach of the rural school which should be taken advantage of, and many more than a casual glance will reveal. It is no more true that rural children know all they can learn about the world of nature and about rural industry than that city children know about life and industry of the cities. Then, too, the rural school certainly is within access of small towns, if not large ones, where an occasional trip, if wisely planned and prepared for, will offer rich understandings. Where several grades are represented in one schoolroom it is possible to plan a single trip for children of various age levels studying different problems, so that all may participate in it to advantage. A visit to a printing office might serve upper-elementary children studying the development of writing; another group working on man's use of machines; or a primary group studying community helpers. The grocery store might easily be a source of understanding for children learning where food comes from and how it is prepared for distribution, for younger ones finding out about community helpers, or for older ones making a study of health agencies directly affecting themselves.

Reference books—Another necessity for such a school program is many reference books and materials, *not limited to encyclopedias*. It is not the purpose of this discussion to take up the matter of school finance, but because any proposed program of teaching must recognize material limitations of the school, it is necessary to face the real problem of providing reference materials and books for individual leisure reading.

In its final analysis this is probably a problem of community and state education. When a board of education, a neighborhood of taxpayers, or a group of lawmakers becomes aware of a real need in the educational program, it will make a great effort to provide funds for satisfying that need. The problem approach to all school work, if the problems

are closely related to the life of children, will of necessity take the school into the community and bring the community into the school. By so doing there is every probability that, given time, there will be a material response to the need for additional funds for books, art supplies, simple musical instruments, tools, and wood for building. Until that need is recognized, at least by the board of education and to a considerable degree by the community, other ways of meeting the deficiency must be sought.

Free material—Most state educational departments operate circulating libraries of both reference materials and books for individual leisure reading for all grade levels. The charge for these is usually just enough to cover cost of transportation. A surprising amount of free informational material may be had by writing to private industrial concerns. Incidentally, this sort of material offers an excellent opportunity to older children for evaluation of advertising. Other advertising material, both that appearing in magazines and that sent free upon request, is often of value. Finally, and of extreme importance, is the wisdom of buying with whatever funds are available for text and reference books, single copies of as many books as can be purchased rather than several duplicates. If the state textbook requirements are such that it can be managed, getting each child to buy a different book, whether for individual reading or for factual materials, is superior to each buying the same book. One small-town school in the Middlewest, when tax funds for supplementary materials vanished, with the consent of children and parents, substituted a small library fee first, for English textbooks, later for social science books, and finally for practically all texts in the elementary and secondary school. These fees made possible the building up of an excellent supply of supplementary materials of all sorts, not just books. Then when school funds became normal again, the community and board of education were eager to allow additional money from tax revenue because they had seen the need and advantage of such an expenditure.

THE PLACE OF SPECIFIC SKILLS IN THE MODERN SCHOOL

In such a language arts program as is being carried on in the modern school, what become of the specific skills, such as spelling, capitalization, punctuation, parts of speech and grammatical constructions, which heretofore have been considered a necessary part of language teaching? The modern school does not in any way deny them a place, altho the exact time when they will be taught may be different from that of the formal subjectmatter school. If some of the things English teachers have long believed important do not appear as needs in a rich experience program where children and teachers are alert to all forms

of language usage, then it seems logical to suppose that those elements really should not be taught. We have included them in the past because we assumed that they were needed. If experiences show that they are not, let them give way to things which are of use.

If specific items are taught as the need for them becomes evident to both teacher and pupil, learning will be more effective for two reasons. In the first place the child's own attitude will have a good effect upon the learning process. We learn more readily the skills we wish to have than we do those superimposed by another. Reading readiness makes for pleasure and satisfaction, and these in turn make for voluntary practise and faster, more effective learning. The same is true for other language skills. The time to teach the spelling of particular words, writing forms, organization, and parts of speech, if they are to be taught, is when the child has need of them.

Language needs for age levels—The experienced teacher, to be sure, can predict with considerable assurance that certain language needs will arise with certain age levels. Most children can neither read nor write before entering school. Often in the first year, and almost invariably during the second, in a rich program considerable drive for reading will be developed naturally. It is usually safe to assume, also, that with children ten and eleven years old there will be need for help with certain composition forms, such as writing conversations, or distinguishing between common and proper nouns. Most seventh-graders will require help with the use of pronouns and with using quotations. The need for such help that will arise does not mean, however, that these topics should be taught before the need is evident. If the school program is challenging to the child, artificial stimulus will not be necessary and the teacher can well afford to wait until the question arises naturally.

The time element—A second reason that learning based upon felt needs is effective is that there is no chance for loss thru carry-over, because the learning occurs when it is wanted. The youngster may not completely learn the thing at hand with the first experience, but to do so is not a natural way of learning. Any course of study in language or in any other skill which is organized around the plan of placing specific skills once and for all time in certain grade levels, and having taught them there, assuming that they will not need to be taught again, is unsound. The learning process, especially involving habits and skills, does not progress in such a manner.

ILLUSTRATIONS OF LANGUAGE DEVELOPMENT THRU ACTIVITIES

A few illustrations of how language arts develop in a problem situation may be useful. These should not be taken as a pattern, but

merely as illustrative of the kind of learning situations which may arise from this newer method of approach.

Early settlers—A fourth-grade group in a small Midwestern town had decided to find out about the people in the community: where they had come from, why they had come, how they had made the journey, and what had happened to them between the time of their arrival and the present. After discussing together ways of finding out these things, most of the children began by asking at home about their own families and interviewing neighbors whom they knew well. Almost every child came back with a story to tell. One had a diary to read which his great-grandmother had kept while making her trip from New England in a covered wagon. Another had a story of her great-grandfather who had deserted the German army to follow his sweetheart to America, and of his search for her in a foreign country where both were unfamiliar with the language and customs of the people. Others told of ancestors who had settled in the state to further the cause of North and South before the Civil War. The lure of a rich farming community had more recently brought others from foreign countries and from less fertile parts of the United States.

These stories called for further talking with adults and for reading to find out more about life in the states and in the parts of the world from which these people had come. Original stories were written, songs were learned, and some children expressed their feeling for immigrants and pioneers in original verse and rhythms. Interest in foreign language was developed until a few children began to learn German from parents or grandparents. The hardships of the pioneer were related in their discussion to the present difficulties of drought, dust storm, pest, and flood with which the children were personally familiar. Much creative writing came from such thinking. Finally plans were made for a dramatization showing the early settlement of the community. The play was planned, written, and produced by the children, and songs and folk dances of the early days were used. The entire study was vital to the children, was rich in developing social understanding, and called for more real language art than any teacher would have dared to demand.

Housing—An older group in the same school chose to study the problem of housing as it directly affected their community. They began by setting up what they eventually agreed would be desirable and reasonable minimum housing standards for people in the United States. This required much discussion, observation, and group planning. Their next step was the decision that they would make a survey of their town to determine exactly what the housing conditions were. This involved working out a simple questionnaire which could be easily

checked. Each pupil agreed to take a certain section of the town and to interview all householders in that section. This, the children saw, would call for a simple explanation, not stereotyped, of the purpose of the call, for extreme courtesy, and for clear speech. On an average, nearly thirty such calls were made by each pupil, which meant thirty different experiences in purposeful oral expression.

When the canvass was completed, results were tabulated and summarized and findings were analyzed for meaning. The findings were startling in many respects. The entire survey was then put into well-organized, permanent written form. Meanwhile the local business men's club asked the pupils to meet with them at luncheon to tell of the survey. By division of labor, a report was made, followed by informal discussion in which pupils and men took part equally, in an earnest attempt to find out what local conditions were and what could be done to improve them. Aside from the social understandings gained by both children and adults and the subsequent changes which resulted, unusual language learnings of almost every sort took place.

Many modern schools can point to similar experiences in connection with the approach to language development thru problems. These two problems are not unique.

CREATIVE ACTIVITIES IN THE LANGUAGE ARTS

There are two phases of language arts that may not be covered by such a problem approach. One is the matter of creative writing; and the other, that of individual free choice reading, reading for pleasure rather than as a definite means of getting information. It is possible that these two phases of language arts may receive sufficient encouragement that they will grow out of such a program, but if they do not, they must be provided for otherwise.

Many modern schools make provisions for individual reading by setting aside in the school program certain time designated as "library hours" or "free reading time." Whether this is regularly scheduled is of course of little importance, but it is important that there be time in the school day for it, that guidance be given in the selection of books, and that some time be given to group sharing of books discovered. Enjoyment of books and the habit of reading for pleasure cannot be developed without a time for reading. Individual abilities, interests, and tastes must be considered and developed thru teacher guidance plus pleasurable reading on the part of the pupils. Books must be available and the teacher must know them. Again, ten different books are far superior to ten copies of the same book.

Creative writing is likely to need as much deliberate fostering as individual reading, especially with older children, who too often have

been given a wrong approach to it. Self-expression thru language is a natural activity; thru writing it can be an added source of satisfaction, for writing allows time for careful and beautiful expression. Not all the children will be writers of poetry or even verse, but all children, given the right approach and encouragement, may get much satisfaction from the simple medium of writing.

Before a child can do creative writing he must, of course, have had experiences to draw from. He is having these all the time but they may be more meager than those of his playmates. There are other experiences which he could have if his powers of observation were fully developed. He might watch the robin getting worms for the young birds' breakfast. He could watch his dog go to sleep if he realized there was anything there which might be worth seeing. To inspire the child to self-expression thru creative writing the teacher often needs to help him see what goes on around him or to realize that that which he has seen is worth writing about. What he enjoys remembering or thinking about he probably will enjoy relating to others. It may be, however, that he needs additional rich experiences to draw from for creative verbal expression. If this is so, if his experiences are too meager to give him any drive for self-expression, then the teacher must see that rich ones are provided. Watching a wind or rain; a pet rabbit eating carrots; a trip to the woods; watching a team pulling a heavy load—all sorts of things may serve as stimuli for writing. In rural communities the whole world of nature may serve.

Once again, time must be allowed for the actual writing and children's sharing of what they have written. For this a flexible schedule is good. One cannot always be certain that he will be able to do creative writing at a specified time; so many schools wisely set aside time designated as a laboratory hour or work period, which children may use in any number of ways depending upon their particular needs. It may be a time for either individual reading or creative writing, or it may include other activities which are not too noisy to be disturbing to others. Whatever plan best fits the particular school is the one to use, but some provision must be made.

There are various devices often used to stimulate writing. Some of these are the school magazine or newspaper, or even a book of student writing. While these may serve as a framework for creative expression, they should be considered merely that and no more. One does not buy a picture because he has a frame, but rather uses a frame because he wants to preserve or show a picture to advantage. The school publication should never be considered an end in itself or used as a device to force writing, but should be merely a means of preserving or exhibiting good writing. Children should not be led to write in order that the

magazine or book may have something in it, or, worse yet, that the child should have something in the book. There must be a more sincere motive than that if writing is to have sincerity and value.

Such a language arts program the modern school fosters, one based upon needs growing out of experiences in problem solving, with additional provision for creative writing and individual reading. That it takes wiser teaching is undeniable. That it requires more work on the part of the teacher is doubtful, because the load of motivation is assumed by the pupils themselves and because there is no loss from carry-over. That it is in keeping with a social philosophy of a democratic society is believed, and that it will continue to spread to schools thruout the entire country is hoped.

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Chapter IV

NEWER TYPES OF INSTRUCTION IN THE SOCIAL STUDIES

Helen Heffernan

FROM THE TIME a child is born and continuing thruout life, he is constantly confronted with the necessity of making adjustments to his natural and social environment. The school exists to help children to make increasingly more effective adjustments to nature and to other human beings. Social studies and science, therefore, occupy a unique place in the curriculum because the entire content must center around either natural phenomena or the activities, achievements, and aspirations of mankind. The language arts—reading, oral and written expression, writing, and spelling—evolved out of man's need to communicate with others; mathematics grew because of man's need to carry on quantitative relationships in his commercial enterprises; even music, art, and literature developed, to a great extent, because of man's need to give expression, in a way which would be understandable to his fellows, to his esthetic striving toward the unattainable.

The whole school program has fundamentally a social purpose. Everything included in it must have social value because society, which established and maintains the school as one of its indispensable social institutions, is concerned primarily that the school function to produce the highest type of citizenship. In a democracy the school must function to reenforce the ideals of justice, liberty, and equality upon which our society is built. The purposes of all education and the purposes of social studies teaching are synonymous. The emphasis upon social studies in the modern curriculum, therefore, is easily defensible.

THE PURPOSE OF TEACHING SOCIAL STUDIES

The social studies program aims to help children to experience effective social living in their present relationship as the best possible preparation for effective social living in adulthood. Desirable social behavior is the product of adequate knowledge about the world of men and their affairs—deep and sympathetic interests in their welfare, ideals of social justice for all mankind, and a thoro understanding of the technics of cooperation by means of which human beings achieve their mutual goals.

The last decade has witnessed tremendous progress in the development of a functioning citizenship. Teachers have been challenged to accept a dynamic social theory and to make the school serve as an

effective instrument in helping bring about social progress. In recent years, the attention of all thinking people has been focused upon the steadily increasing industrialization of our society due to science and technology. The machine has brought about an almost unbelievable increase in capacity to produce. From a social point of view the significant question arises, Will this increased capacity for production operate for the welfare of all mankind? In a democratic society established upon the ideals of liberty, justice, and equality, there can be only one answer. Numerous recent studies[1] have proved that our available resources and ability to produce goods and services are sufficient to guarantee a high standard of living for all. Economists are pointing out the necessity of redesigning our economic system to provide for the needs of all the people rather than for the profit and privilege of a few. Education must make its contribution by putting young people in possession of the facts concerning the problems confronting the presentday world and help them to develop such attitudes of social justice that will make them eager to participate with civic competency in that orderly reconstruction of our institutions essential to meet emergent needs.

Every teacher has the opportunity inherent in the kind of social experiences provided for the children in the classroom to make a significant contribution to a society in which indifference is replaced by concern, prejudice by understanding, and ignorance by knowledge. Every teacher may play a large or a small part in accordance with his own understanding and idealism.

TRENDS IN SOCIAL STUDIES CURRICULUM

As new needs emerge in a changing society, the curriculum must be constantly reorganized in terms of these social demands. Social studies represents a dynamic rather than a static body of knowledge; therefore, the curriculum must be kept flexible and adaptable to the needs of each particular community and group of children.

An analysis of recent courses of study from progressive school systems reveals some definite trends in the social studies curriculum of tremendous significance in realizing our basic purposes. Of these trends, seven merit further analysis. The social studies curriculum is placing increasing emphasis on:

1. The selection of significant units of experience which will help to give children an understanding and appreciation of presentday society.
2. The selection of units of experience which contribute to the purposes of society in maintaining the school.
3. The development of technics of instruction that promote the spirit of democracy.
4. The organismic concept of the nature of learning.

[1] Loeb, Harold, and others. *The Chart of Plenty.* New York: Viking Press, 1935. 180 p.

5. The developmental needs of children.

6. The provision of the widest range of meaningful first-hand experiences available in the community.

7. The provision of rich vicarious experiences thru adequate supplementary books and other visual and auditory aids to learning.

Experiences related to contemporary life—Curriculum-makers show an increasing recognition of the responsibility of the school to prepare children to live in a progressing world. The task of selecting more significant units of experience has required the correlative responsibility of eliminating those units less likely to contribute significantly to the attainment of the social goals of American life. The necessary reorganization is taking place first, by the elimination of those aspects of racial culture which are either too remote in time and place or which lack elements sufficiently similar to modern living to contribute vitally to an understanding of contemporary social life, and secondly, by the elimination of repetition of learning units.

Many topics have remained in the curriculum because they concern interesting, colorful, and romantic cultures rather than because they contribute to the child's understanding of his own society. Many of the learnings which doubtless accrue from these topics might be obtained in more meaningful relationships in some other units. The intensive study of the Eskimos would be generally accepted as a case in point.

A definite trend is discernible to eliminate the repetition of American history units which has burdened the curriculum in the past. A sequence of units is presented which provides an elementary survey of American ways of living. These units contain the geography, history, and science necessary to understand how man has learned to supply his fundamental needs. The scope of the learning units selected for the elementary school is to be found in man's attempt to satisfy his basic wants; in his efforts to make his physical world yield him a living, in the activities in which human beings have engaged for group welfare in producing, consuming, transporting, and merchandising goods; in man's need of communication which expresses itself in language, number, and writing; and in man's interpretation of his emotional and spiritual experiences in music, art, literature, and rhythmics.

The newer courses of study show a courageous selection of those areas of human activity which will yield rich returns in the understanding of children regarding the society in which they must "live, move, and have their being." Even more courage is needed to break traditional patterns which do not contribute richly to such understanding.

Experiences contributing to the democratic ideals—A good citizen is one who can adjust himself happily and successfully to the world

in which he lives and who can contribute intelligently to its progressive improvement. A social studies curriculum which perpetuates the American way of life and which realizes these qualities of dynamic citizenship must center around units of experience of challenging interest in the "here and now." The acceptance of this concept has added tremendous vitality and reality to the types of learning units included.

Experiences promoting the spirit of democracy—Children come by the attitudes, understandings, and appreciations necessary for participation in constructive social life by *actually living in a social situation.* The ideal for the classroom is that it shall provide the conditions of a miniature democracy where children can develop independence; can grow in power to meet problems intelligently; can learn to make wise choices, accept responsibility, cooperate, respect the rights and opinions of others, be tolerant, reserve judgment until all the evidence is considered, challenge dubious statements, respect expert opinion—in a word, acquire those characteristics essential to effective citizenship in a democratic society.

The democratic living together of children in a classroom where there is sufficient freedom to permit the personality of children to develop is the best safeguard for the perpetuation of the democratic spirit. In the classroom where children work on large group endeavors, ability to work together with a minimum of friction emerges as one of the important outcomes of the learning experience. The social studies program provides the laboratory in which self-control, responsibility, and cooperation have an opportunity for development.

Experiences based on the newer concept of the nature of learning—Recent courses of study give evidence of an acceptance of a newer concept of the nature of learning. The mechanistic psychology viewed learning as the establishment of habits thru the repetition of the stimulus-response pattern. The organismic point of view interprets learning as the interaction of the individual and his environment in the process of which both are being modified. The individual responds to his environment as a total organism. In making his environment meet his needs and desires, the individual is stimulated to purposeful action, to planning, to executing, and to evaluating. In the process, the information and the attitudes the individual accepts become a part of the organism and form the basis of his learning in other situations. In view of this interpretation of the learning process, education must help children to have significant experiences. In the process of selecting vital activities, education is drawing more and more upon the life of the community.

Experiences based upon the developmental needs of children—Newer courses of study are attempting to begin with the child at his level of

maturation in arranging the sequence of major learnings. There is an effort manifested to appeal to the interests of children and to serve their immediate needs; there is a recognition of individual variation in interests, needs, and capacity to learn; there is an effort to analyze the social concepts in specific learning units and to adjust these to the level of development. The trend is toward more and more careful analysis of learning units to provide for continuous, consecutive, and cumulative growth at each maturity level.

Learning based upon first-hand experiences—Units of work in social studies are beginning with first-hand contacts with the realities of the child's social life. Out of these first-hand experiences, problems are raised and questions are asked. In an attempt to satisfy genuine interests and needs, the child gains a wider perspective, more penetrating understanding, deeper appreciations, and is led on to other valuable social experiences in a realistic way.

Learning based upon extensive vicarious experiences—The social studies unit provides for rich, vicarious experiences thru reading a wide variety of material adapted to the individual child's level of ability. It utilizes such visual aids as pictures, slides, and motion pictures in extending the child's experience. The phonograph and radio serve as auditory aids in enriching the program.

The child is given much opportunity to clarify his concepts thru many different forms of expression such as construction, drawing, painting, modeling, dramatization, music, and any other means by which his experiences may become vital and meaningful to him.

A TYPICAL SOCIAL EXPERIENCE CURRICULUM

In a recent yearbook[2] of the Department of Supervisors and Directors of Instruction, the widespread interest thruout the nation in curriculum-making is emphasized in this statement:

> . . . the problems of curriculum development are being attacked systematically along a widely spread front. Especially is this true of the larger communities. Organized curriculum development programs are now under way in well over seven-tenths of the cities of above 25,000 population, whereas slightly less than half and exactly a third of the school systems serving communities of 5,000 to 25,000 and below 5,000 respectively, reported such enterprises.

Obviously, less effort is being directed to the problem in rural areas, altho the same yearbook reports "statewide programs of curriculum development—of widely varying degrees of magnitude"[3] as being in process in thirty-two states.

[2] Joint Committee on Curriculum, Department of Supervisors and Directors of Instruction and the Society for Curriculum Study. *The Changing Curriculum*. New York: D. Appleton-Century Co., 1937. p. 1-2.
[3] *Ibid.*, p. 4.

From the point of view of the rural educator, the curriculum materials[4] prepared by the rural teachers of Santa Barbara County, under the guidance of a staff of curriculum consultants from Stanford University and the local director of rural education, may serve as a type of development promising a program better adapted to the needs of teachers in rural schools.

In an introductory chapter, the place of education in a democratic society, the nature of the individual and the learning process, the aim of education, and the implications of purposeful activity are succinctly defined. Following the technic developed in the Virginia Course of Study,[5] the Santa Barbara rural teachers set up an organization of scope and sequence of learning experiences. The scope attempts to define the basic functions of human living as: (1) developing and conserving human resources; (2) developing, conserving, and intelligently utilizing non-human resources; (3) producing, distributing, and consuming goods and services; (4) communicating; (5) transporting; (6) recreating and playing; (7) expressing and satisfying spiritual and esthetic needs; (8) organizing and governing; (9) providing for education.

An integrating theme is established for the level of the elementary school—primary, intermediate, and upper grades—with problems, activities, and materials related to the items of the scope as suggested by the integrating theme for each level. The organization of these materials on the basis of maturity levels rather than grades suggests their adaptation in rural school situations of three or more teachers. The material adapts itself to organizing instruction in three groups. The problem of the one- and two-teacher school is treated briefly and will be discussed further in this chapter.

The integrating themes set up by the Santa Barbara group give a clue to the problems, activities, and materials utilized at each level. The integrating themes are stated as follows:

Primary level: Living more effectively in the child's immediate and expanding environment (home, school, neighborhood, and community) thru participation in activities involved in carrying out the basic functions of human living.

Intermediate grade level: Living more effectively in a changing world and understanding it thru investigating man's relationship to his physical environment, comparing and contrasting our increasing control of the environment with the simpler adjustment technics utilized by people of simpler cultures.

Upper grade level: Gaining increasing effectiveness in carrying out the basic functions of human living thru developing the ability and desire to react to the

[4] Santa Barbara County (California) Department of Education Bulletin 13, September 1, 1937. (Mimeo.)
Part I—Curriculum Materials. Primary Level. 189 p.
Part II—Curriculum Materials. Intermediate Level. 210 p.
Part III—Curriculum Materials. Upper Grade Level. 174 p.

[5] Hall, Sidney B.; Peters, D. W.; and Caswell, H. L. *Procedures for Virginia State Curriculum Program.* Vol. 15. Richmond, Virginia: State Board of Education, July 1932.

total environment according to a pattern which is based upon: (1) an adequate understanding and appreciation of scientific principles and methods involved; (2) an understanding of the resulting increased possibilities of control; and (3) understanding of resulting rapidity of change.

In this program, each teacher is left to develop the "unit of work" to be undertaken with a particular group of children, but extensive lists of problems, activities, and materials are provided. It is suggested that in developing a unit, teachers give consideration to the following factors: "the significant past experiences of pupils; their present dominant interests; the past experiences and present interests of the teacher; the social demands of the school; and the adequacy of the environment in supplying, stimulating, and enriching experiences within the area of the proposed unit of work."

A list of "inclusive units" and "limited units" suggests suitable units on each level. On the primary level, examples of complete units include how the community workers help each other, how the family lives at home, life on a farm, and life in a non-industrial community. More limited units suggested are: food workers in our community; how mail is carried to us; how farmers help us; how the community protects the family; the postman; a study of a market; the grocery store; the bakery.

On the intermediate level, inclusive units suggested are: how man has improved his life thru intelligent use of natural resources; life in Santa Barbara in grandfather's time as contrasted with life here today; life in early California; a study of shelter; a study of foods; a study of clothing; life of the Santa Barbara Indians; how our Mexican neighbors live as contrasted with our way of living. Subsidiary units suggested are: how the pioneers moved westward; fruit industry of California; study of development in communication; study of development in transportation; a study of weather; and man's use of the forests.

On the upper-grade levels, the following inclusive units are suggested: how does science change the way we live in Santa Barbara, in the world; how man's life has been changed thru increasing use of power; and a study of world trade. Subsidiary units suggested are: how science changes the way we transport ourselves and our goods; how modern transportation and machinery affect the way we play; and how modern transportation affects our way of living. These recommended lists are followed with specific suggestions for the preparation of a unit.

PROBLEMS INVOLVED IN ADAPTING CURRICULUM TO THE NEEDS OF THE SMALL RURAL SCHOOL

The entire school system presents no situation in which it is more difficult to make satisfactory curriculum adjustment than in the small

one- and two-teacher rural school. The social studies curriculum for small rural schools must be designed in terms of functional needs. The curriculum-maker must focus attention on the problem of the teacher confronted with a group ranging in age from six to sixteen years, ranging in level of development from early childhood to adolescence. In the past, thousands of harrassed and dissatisfied teachers have attempted to guide the education of rural children directed by a curriculum pattern designed to meet the organization of a city school system. In the interests of children, teachers, and rural life itself, rural educators must concentrate their efforts upon developing a curriculum which considers the interests and needs of country children, the educative resources of the rural community, and at the same time the instructional problems inherent in the rural school. Such a curriculum would include (a) a technic for studying the pupil group in a small rural school to determine interests and needs as a basis for the selection of major units of learning in which the entire group may profitably engage; (b) a flexible organization of units selected on the basis of definite criteria; (c) a suggested plan for the organization of a unit of work around a common center of interest to meet the developmental needs of all the children in the school; and (d) a plan for a cumulative experience record to guarantee continuity of the educational program in a design of educative experiences planned in terms of an eight-year span.

Educational diagnosis—In this relation, a word should be said concerning the value of as complete an educational diagnosis of each individual child as the facilities of the school can provide. The value of knowing everything possible about the child, his biological development, his intellectual and cultural background, his out-of-school interests, his personal and social problems, cannot be overestimated in planning the educational program to which he will be exposed by the school. We need to understand the nature of the organism. As we study individual children we come to realize the extent of the discrepancies to be found in the growth patterns and the impossibility of "driving children abreast over standardized roads of learning."

The scope of the curriculum—The school should reflect the life of the society of which it is a part. The various aspects of human experience in that society may be looked upon as basic human needs. Basic human needs do not change; they are not variable but are fundamental, continuing, and constant. In selecting major units of work around which to orient the school experience of the child, the curriculum-maker may well be guided by these immutable human needs. Education is designed to help individuals to participate in the institutions of society in such a way as to guarantee the preservation and progres-

sive improvement of that society and the most complete self-realization possible for the individual. The units selected should develop understanding and a sense of responsibility toward the social organizations in which the individual lives. The items in the scope suggested by the Santa Barbara Curriculum Materials furnish a clue to the type of units which will probably provide for educative experiences to meet the needs of children representing the wide range of maturity and progress found in the rural school.

What is a unit of work?—Our nomenclature may need clarification. The terms "units of work," "activities," and "areas of experience" are widely used. The significant consideration is the concept of a unit as an experience which challenges interest, stimulates curiosity, requires problem-solving, provides opportunity for creative endeavor, and is so rich in content that it cuts across several fields of human knowledge such as history, geography, science, literature, music, and art, and involves extensive opportunity for the use of the major skills such as reading, writing, spelling, and number. In a recent publication[4] the unit of work is defined as ". . . all of the activities and experiences of whatever nature that are involved in the cooperative investigation of some important aspect of social life. . . ."

Ideally, the curriculum of the future will consist of areas of experience sufficiently real and vital to the child so that he progressively grows in power to meet his problems in a realistic way. If the learning situation is rich enough, children of varying ages and abilities will find opportunity to make contributions to worthy group purposes.

Criteria for the selection and evalution of units of work—Criteria for the selection and evaluation of units of work have been suggested by many authorities.[5] A brief restatement of the more important of these criteria will serve as a guide in the selection of the units of work for the small rural school:

1. The unit should be closely related to the child's life and utilize the resources of his immediate environment.

2. The unit should involve aspects of life of fundamental contemporary significance and should lead to a broadened social outlook, an increased social insight, and to the development of proper social concepts in the major fields of human endeavor.

3. The unit should be within the range of the different interests represented by the levels of development in the group to insure success.

4. The unit should provide opportunity for actual first-hand experiences and rich vicarious experiences thru materials adapted to the varied reading abilities in the group.

[4] *Teachers' Guide to Child Development—Manual for Kindergarten and Primary Teachers.* Compiled by State Curriculum Commission. Sacramento: California State Department of Education, 1936. p. 25.

[5] *Curriculum Making in an Elementary School.* Lincoln Elementary School Staff, Teachers College, Columbia University. Boston: Ginn and Company, 1927. Chapter III.

5. The unit should provide opportunity for many kinds of individual endeavor and group activity, such as dramatization, drawing, painting, constructing, modeling, creative music, etc.

6. The unit should stimulate critical thinking as evidenced by recognition of problems, by their more thoughtful and penetrating consideration, and by growth in the ability to purpose, plan, execute, and evaluate on ever high levels.

7. The unit should provide for the sharing of worthwhile enterprises in a democratic school environment.

While these criteria are neither mutually exclusive nor perhaps even comprehensive they may serve both in the selection and evaluation of selected areas of experience.

Specific areas of experience—The curriculum for the small rural school merits considerable experimentation to prove the value of specific areas of experience and their suitability when undertaken by a heterogeneous age group. Among the units of work which promise to lend themselves most flexibly to the needs of the rural situation, the following may be suggested: community life, shelter, clothing, fire, transportation, recreation, the story of farming, the story of records, primitive life, and local industries such as lumbering, dairying, cattle raising, or fishing. Numerous others which would satisfy the specifications of the criteria could doubtless be added to the list by ingenious teachers. However, an exploration of the areas suggested here in whatever order they might be experienced by a child during a span of eight years in a rural school would afford a sufficiently varied and stimulating program to assure growth.

TYPICAL UNITS OF SOCIAL EXPERIENCE

The problem of describing a typical unit of work illustrative of this type of curriculum is difficult because of the number available. The description presented could be duplicated scores of times from the reports of rural teachers.

A soil conservation unit.* A four-teacher rural school was located in an area where a federal soil conservation project was under way. Discussion and comparisons made in the classroom relative to the decline of Spain, China, and Italy due to deforestation and soil erosion made the children curious as to the seriousness of soil erosion in their own area.

Committees planned a study of erosion. Children read and reported on natural erosion, man's interference with Nature's control of erosion, and human ways to control it.

A government engineer and a farm adviser were invited to come to the school and talk with the children about the conditions in their

*This unit is reported in detail in: "Soil, Its Use and Conservation." *Science Guide for Elementary Schools.* Vol. IV, No. 2, September 1937. Sacramento: State Department of Education.

A unit on soil erosion, Santa Barbara County, California, reveals how closely linked are units in the social studies to environment and contemporary life.

own area. Excursions were planned under the supervision of these officials to see the local soil conservation projects and observe first-hand the relationship between the kind of crop planted on a hillside and the erosion of the soil, the functioning of the flood controls, the way in which the velocity of the water was measured, etc.

The children experimented with erosion in their own school yard, collected various kinds of soil found in the community and tested them for porosity and capillary rise of water. They studied relief maps. They learned new words and correct terms relating to erosion and its problems. They enlisted the help and interest of the entire community in their study of conservation. The increased understanding of the purposes and values of the federal project which resulted from the school work led to changed attitudes on the part of some families and better community cooperation in assisting with the project.

In the development of this curriculum unit the children came to some understanding of the economic and social issues involved in the problem of soil conservation thru first-hand observation and experiment, and thru a study of the results of lack of erosion control in other countries and in certain areas in our own. They learned something of the services of the federal government, the interdependence in nature, the need of specific knowledge on the part of farmers, and they understood their own community better.

The teacher who is striving to develop the highest possible civic understandings and attitudes thru the social studies program, will attempt to provide a progressive series of experiences meaningful to the children. Since experiences are more meaningful when they grow out of first-hand contact with the life of the community, the teacher will attempt to relate all learnings realistically to the social life of which the children are aware. He will give them an opportunity to participate in planning, in carrying out and in evaluating the activities necessary to achieve their purposes. He will try to cultivate in them habits of patience and perseverance in completing the tasks they have undertaken. He will lead the children to ask questions and raise problems rather than merely to accept and memorize factual information. He will help them to relate new learnings to past experiences. He will provide a democratic classroom situation conducive to the development of initiative, cooperation, open-mindedness, critical judgment, and the other qualities that characterize good citizenship.

Knowing the children in the group—Some time could be spent advantageously at the beginning of the school year for the teacher to understand his group. A period of exploration of the previous experiences, abilities, interests, and needs of each child will yield immeasurable returns in helping the teacher adjust the educational program to individual variations.

It is advisable not to plunge immediately into a social studies unit which will engage the children over a long period of time. Exploratory activities could profitably occupy the first three or four weeks while teacher and pupils are getting acquainted. For example, a real social studies unit of brief duration and inestimable value in getting acquainted would grow out of the teacher's question, "How can we make our school a better place in which to work?" The children would readily accept the teacher's purpose, and real planning for the improvement of the environment could be made. These plans would, in themselves, reveal the children's standards. As needs emerge in planning, activities are undertaken. Again, the observant teacher has an opportunity to discern abilities and attitudes. Certain problems may arise for which there is no apparent solution; the teacher may direct the children to books and observe their ability to locate the answers to their questions or to read material of a certain degree of difficulty. As the children work together, the teacher may notice the varying attitudes and make note of weaknesses to be overcome and strengths to be encouraged.

Much opportunity should be afforded, particularly in this period of exploration, for children to utilize a variety of materials; large pieces

of paper may be attached to easels or blackboards and children given time to paint or draw according to their interests. The observant teacher will find in such a situation opportunity to appraise the different interests and abilities. As he discusses with individual children what they have drawn or painted, not only will interests be revealed but he may judge of the individual child's ability to express his ideas orally. Clay or materials and tools for construction will attract the interest of some children and in discussing their efforts with them the teacher will come into that knowledge indispensable to effective teaching.

The library corner, well stocked with colorful, interesting books, will be another revealing source of children's interests and needs. The book that a child chooses when he is free to select is significant. His success in reading the book after he has selected it will give the informed teacher a rough estimate of the child's reading ability.

Directed games on the playground, a nature study excursion, talks about the community, and a score of other possibilities immediately suggest themselves as possible situations in which teachers may come to know children. As these characteristics are revealed, if the teacher will keep a brief informal record in a notebook which has a few pages allotted to each child, he will be amply repaid by his growing knowledge of the child's nature and needs. As he records adjustments that have been made, good habits that are in the process of being established, and more desirable attitudes developing, he will have a document of rare, human interest which records the real accomplishment in this business of teaching children.

Building an adequate background. Much has been said about the importance of giving children an opportunity to choose the unit of work they shall study. Many educators have feared that the learning situation would be formal and stereotyped if teachers planned the curriculum unit in advance. This opinion is not indefensible, but in the light of the busy life of the rural teacher it seems apparent that some rather specific preparation is necessary if the children are to have a vital learning experience. If possible the preliminary preparation should be made in relation to several valuable areas of experience, and that followed by one in which the children display interest. In any case, children may be guided into a profitable learning experience without doing violence to their personalities, if teachers are skilful and sensitive to children's interests.

In approaching any social studies unit, the teacher must build an adequate background of information in regard to the content of the unit. The teacher who stirs the enthusiasm of children in relation to a study of that interesting transitional culture on our southern boundary is one who knows and sympathizes with the long, bitter struggle Mex-

ico has suffered from the days of the conquistadores. He knows the magnificence of the great volcanoes; he appreciates the work of the Mexican craftsman; he sees the significance of a country emerging from a sixteenth-century agrarian society into a twentieth-century technological civilization. The teacher may not use this specific knowledge but he feels secure in leading children thru an area where his own feet are on firm ground.

Planning the guidance of the learning experience—With an adequate background of subjectmatter, the teacher should think thru possible leads to the interest of the group. He should list questions, problems, possible first-hand experiences in the community which might be utilized. He should think thru the social concepts, relationships, and generalizations which should receive special emphasis in the unit. He should list all the possible activities in relation to the unit, whether he uses them ultimately or not. He should locate all the books, pictures, poems, stories, songs, games, phonograph records, or other materials suitable. He should list all the materials needed in connection with the activities. Many of these may be secured at little or no expense if the teacher anticipates the needs of the group.

Organizing the group—The teacher acts as guide and counselor in helping the group organize itself into effective working units. He makes sure that the work of each individual and small group contributes to the purposes of the whole group. He is a contributing member of the group in setting up purposes, in planning activities, and in continually evaluating the results. He is constantly pointing out higher standards, helping children to clarify misconceptions, and challenging dubious conclusions due to hasty thinking. In general, he is gradually leading children into more careful thinking and better ways of meeting their problems.

Opportunity for learning specific skills—The most effective mastery of the skills of learning comes as children feel the need of using the skill in achieving their purposes. The social studies program affords opportunity for oral and written expression including spelling and writing; important specific reading skills are established in searching for materials and in selecting pertinent data. General improvement of reading accompanies the extensive reading which the modern social studies program requires. Whenever the lack of a specific skill is an impediment to the accomplishment of the child's purposes, there is genuine motive for learning.

A CHALLENGE TO THE RURAL TEACHER

The success of the program rests squarely upon the teacher. His insight will give it depth and meaning; his ideals will determine the quality of citizenship produced; his understanding of children will de-

termine the significance of their activities; his enthusiasm will give color and vitality to the problems of social living. Ultimately, his faith in democracy will in a large measure determine the faith of his pupils in democracy, not merely as a form of government, but as a way of life which is the best promise of a better world.

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Chapter V

NATURAL SCIENCES IN THE MODERN RURAL SCHOOL

Fannie W. Dunn

THE MOST IMPORTANT PRINCIPLES of science teaching in the grades can probably be set forth no better than in the following extract from a recent handbook, developed by members of the staff of an outstanding rural laboratory school, the Lincoln School of the Michigan State Normal College at Ypsilanti:

1. The presentation of accurate science information free from animistic sentimentalities is fundamental to the building of a worthwhile science program in the elementary grades.

2. The subjectmatter of science should be selected from all the fields of science rather than merely from the plant and animal phase. It should include such material as will be found in astronomy, physics, meteorology, and other physical science subjects.

3. The selection of such subjectmatter should take into account the environment of the children, their interests, and their abilities.

4. Over a period of years the knowledge of science subjectmatter and of science experiences should finally lead a child to the making of generalities that are concerned with the major themes of science education.

5. The emphasis is shifting from the mere learning of facts to the use of factual material in the interpretation of life and in one's adjustment to it.

6. The development of a scientific attitude on the part of elementary pupils is considered to be of very great importance to them.[1]

ACCURACY, BREADTH, AND USE OF SCIENTIFIC INFORMATION AS TRENDS

The first statement represents a trend away from the practise of attributing to plant and animal life intelligence and purposeful behavior, personifying "baby seeds," "mother rabbits," and the like, and dealing in imaginative rather than in scientific interpretation of natural phenomena. This obviously should be replaced by sound scientific procedure with the objectives indicated in the fourth and sixth statements.

The second trend is toward distinct broadening of the scope of elementary science. Partly under the assumption that children are more interested in animate than inanimate objects, "nature study" in the first quarter of the century was mainly biological. Numerous investigations of children's interests have been made, but they are yet inconclusive, since most of the children studied have been those of urban background. The only study which genuinely represents the rural child is that made by Palmer of Cornell, who for many years collected the

[1] Blough, Glenn O.; Brink, Ida K.; and Dolman, Helen. *Elementary Science for All Grades.* Dansville, N. Y.: F. A. Owen Publishing Co., 1936. p. 9.

questions rural children asked in their letters to him. On the basis of these questions, Palmer states, "My experience with rural children indicates that their experience is much more strongly in the field of biology than are the interests of city children as indicated by the record of others."[7]

The questions of the children studied by Palmer may of course have been influenced by the predominantly biological nature of the Cornell Leaflet series, and the children of today may have different interests, because of different experiences, from those who wrote to Palmer between 1915 and 1925. Questions asked and activities zestfully pursued in some rural schools today certainly indicate that the pupils are greatly interested in rocks, fossils, airplanes, electricity, etc. In any case, the trend toward extending the scope of the interests for which the teacher is alert, and the range of potential and desirable child experiences of which he is aware, are unquestionably sound.

The fifth trend represents an advance in the natural science field which is in accord with changing conceptions of education in general. To a considerable extent experience with and observation of the natural environment in the past has been concerned with knowledge for its own sake, with little regard for any value it might serve in improving adjustment in one's environment. This has, perhaps, been less true in rural than in urban schools, because of the intensely practical nature of much of the rural child's undirected experience with the natural environment. Rural teachers have had in mind two types of values: (1) agricultural and economic, the improvement of farm practises; and (2) esthetic or spiritual, the development of appreciation of the beauty and wonder of the rural environment, and consequent greater enjoyment and wiser use of leisure time.

GENERALIZATIONS SOUGHT AS OUTCOMES OF A CONTINUOUS SCIENCE PROGRAM

The modern emphasis on conceptions or generalizations as the science objectives of the elementary school, referred to in the fourth statement, is due chiefly to the work of Craig.[8] His formulation of the scientific generalizations which his careful investigations led him to select as most important, and his further analysis of these generalizations into learning elements in terms of the child's needs, experiences, observations, and abilities, have afforded elementary teachers a clarified view of the scope and nature of desired scientific learnings with a resultant sense of security and assurance which is largely responsible for the recent recrudescence of science study in elementary schools.

[7] Palmer, E. L. *The Status of Rural Education.* Thirtieth Yearbook, National Society for the Study of Education, Part I. Bloomington, Ill.: the Society, 1931. p. 105.

[8] Craig, Gerald S. *Tentative Course of Study in Elementary Science.* (Grades 1-6). 3 Vols. New York: Teachers College, Columbia University, 1927.

An example of such generalizations, together with suggestions as to child experiences from which they might be expected to arise, is the following condensation from a rural course of study:

First Grade

I. Everything must have a home suited to its needs:
   (a) Insect homes; (b) animal homes; (c) bird homes; (d) water homes; (e) pet homes.

II. All living things need air, water, and sunshine:
   (a) Raising flowers in the schoolroom; (b) making gardens; (c) pets and their care; (d) air in the schoolroom.

III. All living things prepare for seasonal changes:
   (a) Changes in fields and trees; (b) days shorter and nights longer in winter; (c) man prepares for winter; (d) many animals, plants, and insects prepare for winter; (e) effect of cold weather—ice and snow; (f) weather records.

IV. All life starts from an egg or seed:
   (a) Seeds are plant children; (b) bird study; (c) raising chickens; (d) making gardens; (e) raising plants in the schoolroom.

Suggested units of study: pet farms; homes; babies of all kinds; weather.

Seventh Grade:

I. All life has evolved from very simple pre-existing forms and has certain marks of similarity
   1. The cell is the unit of structure and function in all living things. . . .
   3. Many types of life that existed in the past are now extinct. We have learned this from a study of rocks and fossils. . . .
   10. All living matter has the power of growth from within, power to reproduce, and power to rid itself of waste.

II. Man's conception of truth changes
   1. The shape of the earth has been represented in many ways down thru the ages. . . .
   2. Beliefs about the cause and cure of diseases have changed radically. . . .
   6. Changes in speed are astonishing to the world and will be more so in the future. For example, it took George Washington two weeks to go from Virginia to New York. . . .

V. The earth, and all that is on it, is composed of elements, some of which man can isolate and devote to his own use. . . .
   3. The chief element in wood is carbon. In fire, oxygen unites with carbon to form carbondioxide. . . .
   6. Nitrogen is a most useful element to the farmer.

VI. Man can control his environment thru his knowledge of conditions and of the physical and chemical changes in them.

Suggested units of study: early forms of life, old beliefs and superstitions, making a planetarium, how education has helped man live how and where he wishes, study of air and water, a plant nursery, modern inventions, a zoo.[4]

[4] Cabarrus County, North Carolina Schools. *Science Curriculum for Elementary Grades.* Prepared by Elementary Teachers, Mary Hyman, Supervisor, 1932-33.

Besides the statement of objectives in terms of generalizations, the course here cited illustrates another desirable characteristic of elementary science, that is, *continuity*, which Craig has also emphasized as essential to sound learning. Facts are not to be studied merely as facts, learnings are not to be discrete and isolated; on the contrary, learning is to be a continuous growth. The simple generalizations of the first grade are basic to the scientific conceptions of the seventh grade and the adult. Thus, in this course the "power to reproduce" of all living things, as a seventh-grade concept, is a clear outgrowth and extension of the simple first-grade generalization that "all life starts from an egg or seed"; the "marks of similarity" recognized in the seventh grade as characterizing all life find their particularization in the first-grade learnings with respect to "all living things."

GENERALIZATIONS ARRIVED AT OVER A PERIOD OF YEARS

Not every science experience of the child leads at once to an actual formulation of law. This is a most important consideration. Evidence is not lacking that "generalizations" set up as ultimate outcomes may, in the hands of the unskilled, be presented verbally to children far too young to grasp their full meaning, with perhaps one or two "illustrative" experiments or demonstrations, but with no genuine basis in experience.

Gemmill has well described the process by which the desired end is to be attained:

> The scientific generalization is but a short statement or summation of a long experience with the phenomena of the environment. It is an epitome of racial science experience. To be useful in the teaching situation it must be broken down into the original experiences from which it was formed. From the learner's viewpoint, experiences which originally led to the generalization must be had, and, from these experiences, ideas or essential meanings will be developed. . . . Understanding may be begun in the grade school and accomplished in the graduate school.[5]

It is "over a period of years" that his experience in the scientific fields and the knowledge he accumulates, should finally lead a child to the making of generalities of scientific significance—something very different from giving him generalizations ready-made or even attempting formulations on the basis of only one or two experiences.

RESOURCES OF THE RURAL ENVIRONMENT FOR EXPERIENCES BASIC TO SCIENTIFIC LEARNINGS

The rural school has obviously vast resources for scientific experiences in the natural environment which surrounds it. A task still before

[5] Gemmill, Anna M. *An Experimental Study to Determine Science Program for the Education of Elementary Classroom Teachers.* Contributions to Education, No. 715. New York: Teachers College, Columbia University, 1937. p. 32.

rural teachers and curriculum-makers is to explore the bases for scientific learning afforded by the rural environment in general and that of the individual school in particular. The reports of such exploration should indicate as far as possible the experiences potential at various levels of pupil maturity or advancement, with the degree of generalization which might reasonably be hoped for from each.

Excellent beginnings are being made along these lines in courses or units of study aimed especially at service to rural schools. Such a course is in use in Maryland.[6] This is organized under main topics, six to a grade, of which the following are examples: "Behavior of Animals in Fall and Winter" (Grade I); "Sun and Moon Influence What We Do" (Grade III); "Gardening" (Grade IV); "Rocks and Soils" (Grade VII). The main topics are outlined under two general heads, "Things to See and Understand," and "Things to Do and Talk About." Under the former are stated desired generalizations; under the latter are suggested numerous experiences afforded by the environment. Examples of such experiences are selected in order from the lowest to the highest grade:

> Visit the woods in the fall; go to a pond or stream to watch water insects and gather some for an aquarium; watch birds building their nests; find a nearby cut made by a railroad or a state road and notice its rock layers; visit a hill-side after a heavy rain; watch a stream with a swift current; notice how different kinds of animals get ready for winter; name some animals that are hard to be seen; list twenty five plants you know and tell how their seeds are scattered; observe the path the sun takes across the sky; watch the moon each night and mark the date when you see a crescent, a quarter, a half, and a full moon; notice where ice forms on a pond; watch a setting hen; look for spider egg sacs in sheltered places in fall; make a list of animals that never see their parents; count the number of honey bees that visit a red flower in ten minutes, that visit a white flower; put a lighted lantern outdoors at night, put a toad beside it, and watch how many insects it eats in ten minutes; make a list of labor saving devices used at home and on farm; find out which parts of an automobile are electrical; compare plants and insects found on dry hillsides with those in swamps; find some diseased plants; keep a weekly record of kinds of clouds observed, and notice which bring rain; raise an object with a wheel jack; study a windmill; make a water wheel.

Pennsylvania's State Course[7] also gives excellent suggestions of experiences affording science learnings. This course is organized by seasons, and under each topic lists "Suggested Activities" as one of the two main heads. New York's "Tentative Syllabus for Elementary Schools,"[8] also is outlined seasonably, under large topical heads, further

[6] "Science in the Elementary School." *Maryland School Bulletin* XV, No. 1; September 1933. Baltimore, Md.: State Department of Education.

[7] *Courses of Study in Science*. Department of Public Instruction, Harrisburg, Pa., 1932.

[8] *Elementary School Science*. Albany, N. Y.: University of the State of New York Press, 1937.

subdivided into "Objectives" (stated in the form of generalizations), "Procedure," and "Activities." The Cornell Rural School Leaflets, unfortunately available only to the teachers of New York state, have for years been the most fruitful single source of suggestions for elementary science experiences in rural environments. Numerous suggestions are given in the handbook, already referred to, developed in the Lincoln Laboratory School at Ypsilanti.*

Particularly helpful lists of activities potential in science learnings are to be found in Croxton's recent book, *Science in the Elementary School.*[10] Part II of this book, comprising its major portion, consists of a large number of suggested activities, such as exploring the school ground, making friends with birds, cooking outdoors, collecting stones which tell the story of the past, and learning to guess time by the sun. For each activity a list of possible learning outcomes is indicated, for example, rearing insect larvae—interest in wonders of insect life, interest in seasonal changes, development of attitudes excluding fear and repugnance of crawling things, experiences contributory to understanding of reproduction and development. The author, altho not writing specifically for rural schools, clearly recognizes and makes provision for use of the rural environment.

An example of the range of activities potential in a small area of the natural environment comes from a one-teacher school situated near a New England brook.

> The children talked by the side of the brook and decided to plant trees which would be suitable for holding back the soil; to make a rustic bridge to the island; to construct one outdoor aquarium where they could collect and observe frogs, toads, etc., and another for water insects; to place posts and rocks to hold the banks until a rock garden with suitable plants can be started; to make a dam with sluice so as to observe brook life; and to put soil on the island. After a visit to the forest, they planned to clean out underbrush, unless thru study they found that this would destroy the home of the game birds; to loosen soil around the plants; to remove dead branches from trees; to make science paths and label the plants, etc., as to their use to man; to study harmful insects, as to what they are doing and its danger and how to control them; to put up signs to prevent forest fires; and to make observations of birds by furnishing some nesting materials, building a bird bath, and by being quiet in the woods. On the lawn near the building, they decided to continue working on the rock garden, the tree garden, the flower garden, and the field and forest garden, by collecting and planting specimens. They planned labels for all of these plants. Even the weeds are to have a garden and to be studied as to their value or their harm. They would learn to recognize them and to know how they are propagated. The soil erosion and the disappearance of the grass on the hillside aroused curiosity. They noticed the ants were bothering and decided to make an ant house and study the life of the ants. They planned to test the

* See page 73.

[10] Croxton, W. C. *Science in the Elementary School.* New York: McGraw-Hill Book Co., 1937. p. 128-445.

soil and to experiment by adding different fertilizers to see how they affected the growth of the grass.[11]

We might point out in this connection that results of science instruction in rural schools should be sought thru experiences with the natural environment, rather than thru study about it.

> To establish true knowledge, the pupil must have experience with objects and situations as far as possible and build abstractions from these. Substitution of abstract-language learning for experimental activity thwarts the sense of reality.[12]

No amount of verbal or even pictorial information can afford the sound basis of genuine understanding which comes thru the first-hand experiences of observing, watching, making, and doing. Words, indeed, have no meaning till experience has afforded it, and not even the motion picture can take the place of reality. Books and pictures have their place, but it is supplementary.

BETTER ADJUSTMENT WITH ENVIRONMENT A MAJOR OBJECTIVE OF ELEMENTARY SCIENCE

Implicit in the preceding discussion is a principle which, according to Croxton, is one of the major aims of the elementary science program today, namely, sympathetic contact with the child's own life, and intimate relation with the objects and events with which he lives.[13] This is a more positive statement than that of the third "trend" listed in the Ypsilanti Handbook, for example, that the selection of subjectmatter should "take into account the environment of the children, their interests, and their abilities." It is a reiteration of the position taken by Bailey in the early days of the nature study movement:

> The nature study movement is the outgrowth of an effort to put the child into contact and sympathy with its own life. It is strange that such a movement is necessary. It would seem to be natural and almost inevitable that the education of the child should place it in intimate relation with the objects and events with which it lives. It is a fact, however, that our teaching has been largely exotic to the child; that it has begun by taking the child away from its natural environment; that it has concerned itself with subjectmatter rather than with the child. . . .[14]

A similar principle was stated and elaborated a few years ago by a committee of the Rural Section of the Progressive Education Associa-

[11] The Demonstration School at Lime Rock, Connecticut. Plans for the summer of 1937. (Mimeo.)

[12] Slavson, Samuel R., and Speer, Robert K. *Science in the New Education as Applied to the Elementary School*. New York: Prentice Hall, 1934. p. 156.

[13] Croxton, W. C. *Science in the Elementary School*. New York: McGraw-Hill Book Co., 1937. p. 26.

[14] Bailey, Liberty Hyde. *Cornell Nature Study Leaflet*. Nature Study Bulletin, No. 1, 1904. Albany, N. Y., Department of Agriculture. p. 21.

tion, which had been set up to formulate criteria for the selection of units of experience or study for rural schools. The report of this committee concluded with this summary:[9]

"Desirable activities require genuine relationship to the present experience of the child of such variety and range as to provide for all desirable lines of development; make full use of the resources of the environment; specifically utilize all potentialities of the environment for realistic social participation by the pupils; and assure in good time learnings essential to effective adult living."

FULL USE OF NATURAL ENVIRONMENT YIELDS MORE OUTCOMES THAN SCIENCE LEARNINGS ONLY

There is agreement in the main between the criteria quoted above and the trends and principles of elementary science as discussed in the preceding pages. Numbers 1, 3, and 9 seem particularly close to those trends and principles; numbers 5 and 7, less so. The difference lies in breadth of outcomes. Educative activities, according to the fifth and seventh criteria, are to "make full use of the resources of the environment for the improvement of the learner's experiencing," and specifically to "seek out and utilize all potentialities of the environment for realistic social participation on the part of school children." But elementary science courses, as they are today set up in or for rural schools, as for other schools, tend to state their outcomes and to organize their materials of instruction with development in scientific attitudes and learnings as their exclusive aim.

This is obviously accounted for by the fact that they are explicitly courses in science, not outlines for the study of environment. It is, however, in the judgment of the writer, a tendency to be deplored as reactionary rather than as progressive. It is out of harmony with the modern concern for integration of the learner, in that it emphasizes the subject basis of curriculum organization, and it is reactionary in that it replaces with this emphasis an earlier conception, implied in the term "nature study," of educating the whole child thru experiences in his natural environment, with all the development, in whatever subject field, resulting from such experiences.

The undesirability of subject emphasis has not been altogether overlooked by specialists in science. Croxton has called attention to the danger of it in these words:

> The tendency in planning curriculums is distinctly toward integration, especially in the earlier school years. This is a natural consequence of the shift in emphasis from the subjectmatter to the developing child. The experiences of

[9] Dunn, Fannie W., chairman. "Tentative Criteria for Curriculum Selection." *Progressive Education*, October 1934, p. 378.

childhood are not to be sectioned according to arbitrary fields designed for more intensive acquaintance with single aspects of knowledge. Partition of the day into brief periods devoted to specific learnings in the separate subjects is not in accord with the growing concept of education. It probably tends to disorganize the growing child's personality rather than to integrate it. It further tends to place emphasis on unrelated learnings rather than attainment of self-direction in natural units of experience. . . .

What part is science to play in the integrated curriculum? The answer is, as science, nothing; as a contributor to the united program, a very large and important part. It is one of the important elements in attaining satisfaction and self-direction in our contacts with objects and forces. It also plays a part in certain social contacts. Most of the undertakings in an integrated curriculum include experiences that would be included in elementary science in nonintegrated school training."

In terms of the curriculum of the rural school, this means that, since the natural world about the child furnishes so large a proportion of his present experiences, it is probably the chief source of science instruction. This is not to say that esthetic, social, or spiritual ends are properly to be demanded of science teaching. It is to say that we are not teaching science, but children, and that the experiences of children in and with their environment are not to be organized and directed in the school with an eye single to any subject's ends.

The crux of the matter lies in a confusion of experience and outcomes. One does not experience science or history or arithmetic or any other subject as such in life, at least outside the schoolroom. One experiences, perhaps, taking care of a pig, finding and learning about a fossil, seeing and enjoying the autumn woods, but these are not science. Out of such experience may come understandings of scientific principles, development of a scientific attitude, but there may also come learnings which we call history or arithmetic or art.

ILLUSTRATIONS OF THE VARIETY OF OUTCOMES FROM EXPERIENCES WITH THE RURAL ENVIRONMENT

An excellent illustration of an extensive experience or series of experiences which began with a situation in the natural environment, is reported in a bulletin of the Raleigh schools. It began as "a study of a few trees," but before the experience was ended many leads had arisen and been followed, with resultant growth along many lines.

Out of it came large generalizations not only in elementary science, but also in geography; an extensive study of forest conservation and of industrial uses of trees; much enrichment of meanings in history and literature; stimulus to expression in music, dance, and verse; a study of pictures in which trees were important features, eventuating

"Craxton, W. C. *Science in the Elementary School*. New York: McGraw-Hill Book Co., 1937. p. 72-73.

in a gift to the class, by one of its members, of a copy of "The Harp of the Winds"; extensive reading and much letter writing; construction of equipment for a science center for the classroom; application of mathematics in measuring the height of trees; map-making; sewing; cooking—experiences, indeed, in almost every type of educative activity."

Two aspects of environmental study in rural schools, with improved use of leisure as their chief objective, are hobbies and vacation activities.[17] Neither of these is exclusively limited to science activities, but experiences eventuating in science learnings play a large part in each. Numerous rural teachers definitely seek to develop individual interests which may grow into hobbies, and plan with their pupils individual and small group activities, to be carried on during the long summer vacation and reported to their fellows when school begins again in the fall. These reports may take the form of exhibits, photographs, collections, and the like, and they may result in a contagion of interests which will influence and perhaps determine the projects of the new school year. School museums and science centers,[18] aquariums, and terrariums are often objective evidences of the interests thus developed and shared.

SPECIAL PROBLEMS OF ORGANIZATION OF SCIENCE WORK IN SMALL RURAL SCHOOLS

The foregoing pages have dealt with principles of content and organization applicable in rural schools of all types. Small rural schools, of one and two teachers, have an additional problem of organization consequent upon their multi-graded nature, which is as yet not explicitly recognized in courses of study. It is clearly impossible for a single teacher to conduct eight distinct grades of work in elementary science simultaneously, even were it desirable with the small number of children in any one grade in a one-teacher school.

The tendency is increasing to organize one-teacher schools in groups rather than grades, with from two to four groups in an eight grade school, the number depending on the nature of the activity concerned. There is some use of whole-school or "vertical" units in one-teacher schools, in which every pupil takes part in a single unit, each with a different share in its activities, and with different expectations in kind or degree of outcomes according to the abilities of the individuals participating.

[17] Bullard, Mrs. M. Louise. "Study of a Few Trees in a Community." *Bulletin*, Raleigh Elementary Education Council, Raleigh, N. C. January 1930.

[18] For valuable suggestions for vacation activities, see *When I Can Choose*. Washington State Normal School, Bellingham, Wash., 1927. p. 44.

[19] For discussion of the organization and use of a science center, see: Gustin, Margaret, and Hayes, Margaret L. *Activities in the Public School*. Chapel Hill, N. C.: University of North Carolina Press, 1934. Ch. III.

This type of organization has, to some extent, been elaborated by Palmer in a "School Nature Outline," consisting of rather extensive topics, such as "The Seasons, the Sun and Its Family"; "Gardening and Non-Woody Plants"; and "Birds of Prey." Under each of these topics are suggestions for first and second grades, suggestions for third and fourth grades, and suggestions for fifth and sixth grades.[20]

For example, with respect to "The Seasons, the Sun and Its Family," it is suggested that the primary grades recognize the characteristics of the seasons and begin to see a relationship of the sun thereto, that they note differences in the moon at different times of the month, and observe that the place of sunrises and sunsets changes; and that plants and animals are affected by the seasons in various observable ways. The intermediate grades may make and use shadow sticks and compare with temperature readings to show relation between sunshine and warmth, may get an understanding of the reasons for the moon's changing appearance, and may record and begin to account for changes in length of days as the seasons pass. The advanced grades will undertake, perhaps, to discover the relation of the moon to tides, and to understand the relation of the sun to all the phenomena of seasonal change. They may study the solar system, learn the meaning of "morning" and "evening" stars, perhaps understand what is meant by the "signs of the equinox."

These undertakings will not necessarily be carried on in separate classes, but in general the school will work as a unit, with individuals or committees from time to time carrying certain inquiries or experiments further than is of interest to the whole group.

Altho the large topics of Palmer's outline, as well as the suggested learnings, would probably be considerably revised today in the light of Craig's analysis of science objectives, the general plan of organization is useful. An outline replacing Palmer's large topics with a list of environmental experiences from which science outcomes might be expected, and suggesting suitable minor activities and potential learnings for the several levels of pupil advancement, would be of incalculable service, not only in increasing the effectiveness of science study but also in realizing other types of educational possibilities of the natural environment. A compendium of this type, to represent all parts of the United States, might well be undertaken by rural teachers and supervisors especially interested in the science aspect of the elementary curriculum.

[20] Pack, Arthur N., and Palmer, E. Laurence. *The Nature Almanac*. Washington, D. C.: American Nature Association, 1927. p. 216-73.

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Chapter VI

MODERN PRACTISES IN MUSIC IN RURAL SCHOOLS

Edith M. Keller

MUSIC AS ONE OF THE FINE ARTS makes such essential esthetic and emotional contributions to life that its place in the education of boys and girls is now generally recognized. Decidedly there is need for more music in education and more education in music in our schools. Altho it may not be possible or desirable that everyone become a technical musician, music has a desirable contribution to make to the enrichment of the life of everyone.

THE PROGRAM OF MUSIC EDUCATION

A constructive program of music education develops such musical intelligence as will enable one to gain the greatest pleasure and inspiration in performing and listening to music. It discovers and develops the musical possibilities of the individual. It develops an understanding of the art of music in its relation to other arts and an appreciation of its contribution to civilization.

In building a music program the need for flexibility is at all times imperative. It must have a variety of activities, such as singing, rhythm, listening, reading and theory, playing instruments, and creating. Singing provides a more comprehensive study of music. All of us have an inherent feeling for rhythm. Thru different kinds of rhythm instruction, such as singing games, folk dances, and rhythm band activities, children feel the symmetry and balance of a composition. Listening to musical masterpieces, the foundation of music appreciation, is a good way to discover new beauties and deeper meanings in music. The ability to read music opens up new avenues of enjoyment and the study of a musical instrument gives command of a wholesome means of self-expression. The creating of an original melody and its recording stimulate interest in problems of staff notation and lead to pride in accomplishment.

A study of American music helps children to appreciate the American contribution to art. For example, Indian music correlates with other phases of Indian life, and the music of Colonial days blends with American folk lore.

Adequate supervision and good teaching are essential to a well-organized music program. The teacher needs keen sensitivity and receptivity to impressions of beauty in music. Personality and enthusiasm are also desirable qualities.

As in other subjects, adequate equipment is also essential. A music room with a keyboard instrument, music books, a chromatic pitch pipe, a phonograph with adequate records, a radio, supplementary song-books, some good reference books on music and musicians will aid greatly in developing a love for music. Other desirable equipment includes band instruments, flash cards, and music magazines.

Problems of Music Instruction in Rural Schools

Music in the past has been given less emphasis in rural than in urban districts. It is indeed unfortunate that where the greater need exists, the advantages of music education are not available. Some of the reasons for this are isolation, limited transportation facilities, short school terms, crowded schedules, teachers with little or no musical ability and training, and lack of necessary equipment. Financial support in many instances has been inadequate or entirely lacking. School authorities and patrons in many communities have not awakened to the possibilities of music and its stimulating effect on the whole educational program.

In recent years there has been an attempt by most state governments to equalize educational opportunities. A newer type of educational philosophy is permeating our educational program and we note an awakening. Hopeful signs are in evidence in many places. Progressive rural educators have found it possible to change the barren atmosphere of the school to one of joy and happiness thru music. Where there has been an interest on the part of administrators, board members, parents, and teachers, programs have developed which have been of inestimable value in developing a finer type of school and community consciousness. The smallest rural school may become a center for community culture in which there is a constantly growing desire for participation in musical activities by children and parents, both in and out of school.

There is no difference between the aim of the music program in rural schools and in urban schools if the child is considered the center of attention. His emotions, longings, and desires are the same, no matter where he lives. Altho rural conditions may result in inadequate schools, each child should be given the opportunity to sing, to express himself thru rhythm, to learn to listen with pleasure to beautiful music, and to play some musical instrument if he so desires. The rural child has the advantage of living in the atmosphere of the great out-of-doors where the orchestra of Nature may be heard in the babbling of the brook, the sighing of the wind in the trees, the moaning of the surf, and the singing of the birds. The music instruction should bear a close relation to the experiences coming from the rural environment.

AGENCIES FOR ENCOURAGING MUSIC INSTRUCTION IN RURAL SCHOOLS

A few forward-looking states have been successful in developing splendid rural music programs thru the leadership of state supervisors of music. It should not be difficult to secure the cooperation of state departments of education, state education associations, organized groups of county superintendents and administrators. Colleges, universities, and normal schools are centers of interest and influence and can play a most important part in the musical development of the surrounding territory. They can train teachers for the work, assist those in service, and promote general interest in numerous ways. The National Congress of Parents and Teachers and the state associations are definitely committed to an adequate program of music education for both children and adults. State music teachers associations, federated music clubs, such state rural organizations as the grange, farm bureau, and similar groups are on the list of interested agencies which are cooperating to secure the support of local units. A definite way of interesting adult groups in music is to encourage and sponsor ensembles, choruses, bands and orchestras, and perhaps study groups for them. They provide interesting musical activities which result in increased interest and support for the work in the schools and communities.

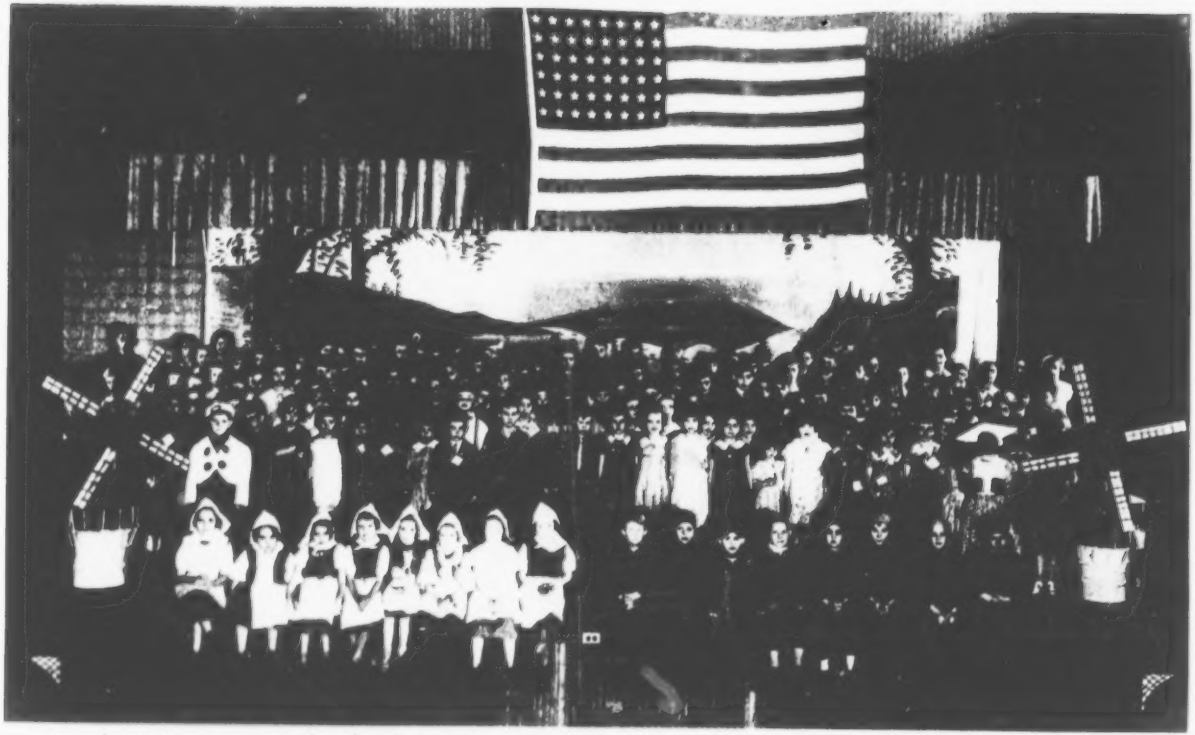
ADMINISTRATIVE PROVISIONS FOR MUSIC INSTRUCTION IN RURAL SCHOOLS

Rural music has shown rapid progress where consolidation of schools has taken place. In many such districts, school authorities have sponsored a variety of musical activities in both the schools and the communities they serve.

A plan worthy of consideration is the combination of several small schools for larger group activity and participation. The ideal unit is that of the county or township. Under effective county supervision, opportunities and results equal to that of many urban districts are possible. Several small schools may be combined on a circuit with one teacher in charge.

This makes possible the uniting of groups in which there can be better balance, both for instruction in vocal and instrumental music. It provides greater incentive and inspiration as the result of larger group participation.

Where it is impossible to have a circuit music teacher it is essential that someone with adequate musical background and training be secured. In the isolated district this is the only solution to the problem. The resourceful classroom teacher with limited training, but with a love for music and a realization of its value, can accomplish much thru the use of the phonograph and the radio. Personal aids such as



Country music festival under the supervision of Janet White, supervisor of music, Hocking County, Ohio

courses of study, books, records, and reference materials are available and make possible a limited program of real interest. Practically every community has unused phonographs, radios, pianos, organs, and other instruments which may be secured by the school for the asking. However, where the teacher has neither interest nor ability, there is a decided tendency to neglect music altogether or to use it purely for recreation.

MUSIC FESTIVALS, PAGEANTS, AND ACTIVITIES

Interschool musical activities, such as a festival, are possible in any well-organized county or district. Such massed groups as all-county choruses, glee clubs, bands, and orchestras broaden the opportunity for participation, and provide more satisfying musical experiences than are possible with small unbalanced groups within a single school. Such events become vital factors in socializing large areas. A county or district festival is a worthy culmination of the year's work and may be used as a fitting celebration for National Music Week. Support and interest of the county and local school authorities are essential to the success of any such event.

The type of program will vary in accordance with local needs and interests. Growth in social and musical values should be the goal. In some festivals a pageant of nations has been highly effective. A single school or group of schools may represent a country by singing and playing its folk music, dancing its folk dances, in costume if possible, and perhaps playing its native instruments. In this manner the music of a number of countries may be used, culminating in the singing of some of our appropriate American folk and national songs. The same plan is possible with the Christmas or May Day music of different peoples. Guest artists who sing or play suitable selections afford interesting features. Guest conductors encourage and inspire and can aid by giving constructive suggestions for the improvement of the work. Local schools may present specially talented groups, thus providing opportunity for comparison of work and lending variety to the program. The music festival has untold possibilities in arousing and stimulating school and community interest in music.

A feature worthy of serious consideration in festivals is providing an opportunity for adult participation thru group singing under inspirational leadership. Alumni are interested in opportunities for participation after school days are at an end. There are many occasions when children and parents may unite in the singing of a group of songs of interest and appeal to all. Perhaps a Mothersingers Chorus will sing. Other things possible are the development of a county course of study, the organization of summer music camps, a county or travel-

ing library. Instrumental experts may help their fellow teachers on unfamiliar instruments. There is no limit to the many interesting things which can be done under an effective county organization.

EXAMPLES AND ILLUSTRATIONS

I am indebted to Lois Fasig, Gallipolis, county supervisor of music in Gallia County, Ohio, for an account of some of her plans. Several years ago some one-room schools were consolidated, making possible a better organized program in reading, art, and music in the new centers. Very few, if any, of the children had had any previous musical background or instruction. At first they were self-conscious but it was not long until they began to feel the message of the music and to throw aside their timidity. Their response was eager and enthusiastic as the joys and beauties of worthy music became a reality to them.

Washington's Birthday, the Minuet. In February, when the attention of the children is naturally directed to Washington and Lincoln, the idea of Colonial music was used with an intermediate group in a two-room school. The minuet, so popular in Colonial days, was learned as a dance and as a song. Mozart, a composer whose early music has a vital appeal for children, was studied then his minuet. The classroom teacher also read stories about his life to the children. The place of the minuet in court life appealed to them and they learned to dance it. The dancing was anything but perfect or dainty, for the children's shoes did not make that possible, but their imaginations were aroused and they learned to step lightly and carefully. They discovered that the dance goes in threes and that it is dainty and dignified. They became very fond of Mozart, the "Wonder Boy," then his beautiful music, and he became as real and personal to them as Washington and Lincoln.

Negro spirituals. In the upper grades the children became interested in the music of the Negro then their study of the South. They discovered that the work songs and spirituals of the black man are true expressions of his emotions and imaginations. They became aware of the deep feeling with which these songs were sung. As a result of their growing imaginations, the children were soon singing in unison and occasionally in two parts such songs as "Swing Low, Sweet Chariot," "Steal Away to Jesus," "Go Down Moses," "Water Boy," and "Shortnin' Bread." They found that the Negro, then his rich and colorful music, has made a real contribution to our American music literature.

The circus. Later other more pretentious attempts were made with different age levels. In Grades I and II a center of interest selected was the circus, which affords a source of never ending interest for children. Very few had ever seen a circus and many did not even know what

it was. In the reading lessons there were stories about it. Songs and rhythms furnished material for most of the music. Children became high-stepping horses, elephants, clowns, and ponies running in circles. Games and dances were created to fit the music. Tight-rope walkers balanced paper parasols, and monkeys performed; a balloon man and a master of ceremonies provided good impersonations for non-singers. In the art classes the children used the native clay of the county for modeling circus animals. The stage background for the circus was made by the children. It included a circus parade with clowns, animals in cages, and other interesting features done in freehand. A rhythm band led the parade. When the study was completed a performance was given. The parents were amazed as they saw their children keep time to the music and impersonate in their original way the different characters and animals of the circus.

Hansel and Gretel.—In Grades III and IV, "Hansel and Gretel" was used. The story was read and discussed by the children in the reading and English classes. Different versions were read and the children decided on the one they preferred to use for dramatization. A number of phonograph records of Hansel and Gretel music gave them an idea of the whole opera. It provided a background of music which they themselves were unable to perform and developed an appreciation of story portrayed in music. Songs appropriate for the children were learned and dances were created to use with such songs as "Partner, Come and Dance with Me." A performance was given for the parents. The only available place was a small country church with bare walls. The children in the upper grades, with the help of the art supervisor, made the stage scenery. There was a background of heavy, brown paper on which were pasted trees and leaves which had been cut free-hand and colored. The homeroom teacher helped with the making of the gay little house, large enough to use and decorated with window boxes. At the final performance the story was read to the audience by a good reader, and the characters told the story in pantomime. Both children and parents loved this music of Humperdinck, whose immortal "Hansel and Gretel" will ever be a joy in the hearts and lives of children. There were many desirable outcomes as a result of this study.

Other musical occasions.—Other centers of interest used with different groups were a Pageant of Nations; Spring; and Christmas. There is no limit to what can be accomplished along this line if there is interest and cooperation. Much of the success of the units was due to the wholehearted support of the county superintendent and the classroom teachers, many of whom had had little or no previous experience with music. They worked as eagerly and enthusiastically as the children. The possibilities of music in any school, urban or rural, are limited only by the vision of the school administrators and the teachers.

Education is considered worthwhile in proportion to its function in enriched daily living. Meaningful musical experiences outside of school should be a natural part of the child's whole environment. They result in social activities of permanent value which are felt in the home, church, club—in fact, in all of the civic groups of the community.

Longfellow said, "Show me the home wherein music dwells and I shall show you a happy, peaceful, and contented home." The home of today, even in isolated rural communities, has felt changing social and economic trends. As a result, it frequently lacks the stabilizing influence of earlier days. Music can help to create a new cycle of home activities and interests and can play an increasingly important part in bringing about a closer family unity. Happy indeed is the home which avails itself of the opportunity for enjoyable family participation in music thru singing, playing, and listening. Children should be taught many beautiful and appropriate songs in school and should be encouraged to sing them with others in the home. In like manner the work in instrumental music should stress the home side and set up the ideal of family instrumental groups. In the selection of an instrument for the child it is frequently possible to choose one which will lend itself to a desirable family ensemble. The tastes and appreciations formed in school and the home will determine largely the type of music they will care to hear when free to select music for their own enjoyment. A home library of books about music and musicians is valuable in the development of background and appreciation. The radio makes possible many an hour of delightful family enjoyment in music if parents and children are cognizant of the best and most appropriate broadcasts. As a result of a meaningful program in the school and home there will be noted a growing recognition and appreciation of musical values and a preference for the fine, the true, the beautiful in music.

The music of the school can and should play a significant part in the development of community life. Family and neighborhood groups participating in vocal and instrumental music are not only possible but are enjoyable. A whole community may be brought into closer relationship thru its musical interests, many of which naturally grow out of the music work of the school. Music plays a definite part in the work of the parent-teacher association and other adult groups. Adult participation and adult education in music result in adult support for music. Singing and playing children are the musical citizens of tomorrow and will show future leadership in community music affairs.

From earliest times music has been closely allied with religion. It has added greatly to the effectiveness of religious worship, not as an adornment but as an integral part of the service. The tendency of the

church today is to capitalize on its own musical talent. Choirs of children or of children and adults participating in the singing of our fine hymns and anthems enrich the spiritual experiences of all.

Dewey says that the true essence of democracy is a wide and intimate sharing of experience and not its political structure. The finer the experiences we have to share, the richer will be our social life. Music, because of its many contributions to a desirable citizenship, is recognized as a potent factor in education. A life without beauty is only half lived, and one without music is indeed barren. The Germans have expressed it in these words: "To be rich—enormously rich so as to be able to buy everything beautiful, to satisfy every heart's desire—who has not known this longing? And yet, the richest man is poor if he has never felt in his heart the noble magic of music."

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Chapter VII

LOCAL ENVIRONMENT AS A SOURCE OF INSTRUCTIONAL MATERIALS

Anne V. Holdford

CHILDREN LEARN in terms of their experiences. They come to understand the world in which they live in terms of their contacts with it. The first contact is of course with the communities in which they live. It follows, therefore, that an understanding of the community, its institutions, activities, and customs is the fundamental point of departure for acquiring an understanding of the institutions and problems of other communities and nations.

Regardless of the type of curriculum organization, whether traditional subjectmatter, activity, or integrated subjectmatter, the immediate environment should be the first source of instructional materials. The proper and full use of the environment may be the major element in the curriculum, not merely the enrichment of logically arranged subjectmatter set forth in a formal course of study.

It is not enough for teachers to accept the general principle that educative experience lies in the child's environment; they need to know how to collect, compile, and analyze the factual and descriptive materials about community resources. It is necessary that teachers know how to find out specifically what is important in the community in which they teach and how to use the community as a laboratory for the instruction of children. The teachers in each school must determine the best way of interpreting the community to its children. Altho many needs and resources are common to many communities, the teachers of each school may have specific problems different from all other schools. Resources to be used are to be chosen, then, for the specific locality according to the needs and interests of the learning group. Certain activities and data for curriculum enrichment in one community are not necessarily appropriate for another community. It may be quite the contrary. Teaching and learning should not be "custom-made."

The purpose of this chapter is to present an illustration of how the community environment may be used as a source of curriculum materials in a rural consolidated school. It is thought that the methods and technic used may be widely adapted in other communities. In the following pages will be described in brief form a project developed and executed by the teachers of the Bethlehem Central Schools, Delmar, New York, during the school year 1936-37.

Technic followed—In order to have a file of source material for curriculum enrichment, a member from each school secured from each teacher in his school, lists of materials available for loan in the district with names and addresses of owners of such material. These details were copied on small cards and filed in the elementary-school office for classroom use. In addition to listing articles that could be borrowed from individual owners in the community, some schools started a museum for the articles donated as permanent equipment.

In the latter part of the school year 1936 it was decided by the teachers of the Bethlehem schools that they would carry on during the succeeding school year a survey of the area served by their schools to discover fundamental information that could be utilized in the instructional program. They decided to organize into groups, to make field trips, to record in systematic form the information obtained, and to make a compilation of source materials that could be filed for future use. It was decided that the various groups would meet on alternate Mondays from 2:45 to 5:00 o'clock to plan for the next field trip and to discuss the problems that had arisen from previous trips.

A steering committee proposed the problems and methods of study and work. The groups or committees held informal discussions on the methods and technics proposed by the Steering Committee and tried them out experimentally in the study of some specific enterprise or industry. Thru the process of testing out, by trial and error so to speak, conclusions were drawn as to how to study community industries, what information to obtain, what data to compile, and how to arrange such information and material for future instructional use. All procedures were based on the democratic principle of individual cooperation thru organized groups.

The Steering Committee composed of one member from each of the seven groups was organized. This committee met on each Tuesday afternoon from 3:30 to 5:00 o'clock in order to (a) evaluate the progress made at the regular meetings on Monday, (b) make plans for the next general meeting, and (c) evaluate the work of the various committees. The Steering Committee prepared definite suggestions and sent them in mimeographed form to each teacher. Details of procedure for the next general meeting were also prepared. Similar work was done for the group meetings as the need arose.

Discussions were held on the subject of what industries in the area might be studied. Among those suggested were Schnurr and Wood Company, Delmar Lumber Company, Hotaling Coal Company, Dempf Bakery, Keyser Junk Yard, Adams Hardware, Shoe Repair, A & P Grocery, Wood's 5 and 10, Printing Office, Sawmill, and Molding Sand Company.

Advantages—Several advantages of the survey were set forth by the various teachers. Among these advantages are:

1. A survey and study of the community will not only enlist the interest of the pupils and teachers but also that of the parents and thus lead to a better understanding of the activity work in the school.
2. The most effective starting point in beginning a study of environment is the home area.
3. Things to be studied in the community are easily accessible at all times.
4. The study offers an excellent opportunity to teach citizenship and certain attitudes needed in the community.
5. When finished, the data can be compiled in a permanent record and presented to the library.
6. It is a study that will broaden and grow in the future.
7. The study is correlated with this year's study and with the development of the school museum and the children's fair and music festival to be held in the spring.

It was decided to use the following general outline in organizing the survey:

1. Local industries and resources
2. Local historical events and data
3. Contacts with lavmen and local artists
4. Community recreational facilities
5. Physiographical features of the locality
6. Cultural, industrial, and social centers
7. Occupational activities

At the meetings in the fall of 1936, the teachers discussed: (a) underlying principles of excursions; (b) the teacher's part in planning excursions; (c) the pupils' part in planning excursions; (d) types of excursions; (e) types of follow-up work to be used; and (f) frequency of excursions.

Certain references were recommended by the Steering Committee.[1]

After discussion in group meetings an outline of information that should be obtained from the surveys was agreed upon. The outline follows:

1. Industrial learnings
   1. How things are made from raw materials
   2. Sources of materials
   3. Process and procedures
   4. Distribution
   5. Uses

[1] Ann Arbor Board of Education. *Helping Children Experience the Realities of Social Order.* Ann Arbor Course of Study. Ann Arbor, Mich.: the Board, 1935. 307 p. †Brunner, Edmund deS. *Surveying Your Community: A Handbook of Method for the Rural Church.* Garden City, N. Y.: Doubleday, Doran and Co., 1925. 109 p. †Brunner, Edmund deS. *Village Communities.* Garden City, N. Y.: Doubleday, Doran and Co., 1927. 244 p. †Brunner, Edmund deS., and Kolb, J. H. *Rural Social Trends.* New York: McGraw-Hill Book Co., 1933. 386 p. †Brunner, Edmund deS., and Kolb, J. H. *A Study of Rural Society, Its Organization and Changes.* Boston: Houghton Mifflin Co., 1935. 642 p. †Lynd, Robert S., and Lynd, Helen M. *Middletown: A Study in Contemporary American Culture.* New York: Harcourt, Brace and Co., 1929. 550 p.

6. Byproducts, if any
7. Machinery and inventions used in the process of changing raw materials into usable products.

Problem: What possible effect have these improved processes had on our standard of living? On that of the group employed in your chosen industry?

II. Social learnings
1. How people live
2. How people work
3. How people play
4. How people are educated
5. What their religion is.

Problem: In the light of general social trends and of the above findings how can the group help to better the present state of affairs?

III. Economic learnings
1. Standards of living
2. Means of making a living
3. Interrelation and interdependance of people

Problem: What, if any, responsibility do we as a group feel in light of our findings?

IV. Civic learnings
1. Politics
a. Parties participating in elections
b. Percent voting
c. Percent of eligible voters voting and constituting a majority
d. Part individual plays in civic life
e. Part individual plays in political life.
2. Civic life
a. Inter-state Commerce Commission
b. Public Service Commission
c. Taxation
d. Election.
3. Cultural
a. Part the individual plays in community life.

Problem: Are our findings in line with our ideas of a democratic government?

V. Historical learnings
1. Comparison of old and new as basis of evaluation and appreciation
2. General improvements in world of science and in this particular plant
3. Improvements or inventions in field of your particular interest

Problem: What social problems have grown out of the old order changing?

In order to assist the groups in obtaining the information indicated in the outline above, the following suggestions were given as "starters":

V. Things we want to know
1. The hours of labor
2. Number of people employed
3. Number of people working on one product
4. Race discrimination
5. Labor laws
6. Public and private ownership

B. Activities of each committee—suggestive helps for carrying on research
   1. Make a list of all questions
   2. Organize these questions under certain heads
      a. Industrial learnings
      b. Social learnings
      c. Cultural learnings
      d. Civic learnings
      e. Historical learnings
   3. Find out answers to all question
   4. Ask more questions as research progresses
   5. Locate further sources for investigation
   6. Know where to locate these questions
   7. Decide on how to file your material for intelligent use
   8. List all other possible sources for help
   9. Make a bibliography[1]
   10. Make a card index and a card catalog file
   11. Make a scrap book
   12. Collect and mount pictures
   13. Display books and pictures about your particular industry
   14. File materials
   15. Make a map of the community in which the industry is located
   16. Collect and put in usable form all available materials.

C. Preliminary steps before visit to plant
   1. List all questions thought necessary
   2. Have chairman of each committee investigate the territory before the group visits it
      a. Have a conference with the manager of plant and state purpose of your investigation.

The Steering Committee assumed responsibility for contacting the managers of Schnurr and Wood, Delmar Lumber Company, Printing Office, Sawmill, and Keyser Junk Yard. The method of approach decided upon was to explain the problem to the manager of the concern to be visited and request his cooperation. It was decided to explain that the teachers considered the industries very important to the community and that they desired that the children learn of their importance. In contacting the managers the following information was sought:

1. What information would he (the manager) be willing to contribute?
2. May the group visit the plant? If not, why?
3. Will there be someone to conduct the group?
4. How large may the group be?
5. Would it be possible to have available, at the time of the visit, samples, literature, and other materials for the information of the group?

Arrangements for the visits having been made, the groups visited the plants assigned to them and prepared reports to be presented to the entire group. A copy of the Sawmill Committee's report is inserted here to illustrate the type of preliminary reports made by the various committees.

[1] Alexander, Carter. *How to Locate Educational Information and Data.* New York: Teachers College, Columbia University, 1938. 272 p.

Sawmill

History—The sawmill at Slingerlands was built about fifty years ago on its present site by a man named Dietz. Then it was centrally located, not only for distribution but also for raw material. The mill is located at the foot of a hill on the top of which is the road between two towns. This facilitates unloading the logs for they merely roll down the slope to the mill. It is not so simple to remove the sawed lumber, however, for the same slope which facilitates unloading, hinders delivering the finished product.

Water power was first used. This gave way to steam and finally to electricity, which is being used by the present owner, Mr. Frazier, to run the machinery.

Industrial—Practically all of the work done at this mill is for the farmers of the immediate vicinity altho for the past few years some orders have been brought in from other sections. Very little quarter sawing of oak is done. Pine sawing is the main source of supply.

The farmers haul their logs by team or truck to the mill. There they are rolled off on the skidways. The butts of the logs are at this time stamped with the owner's initials so as to prevent error in delivering. If there is considerable work on hand, the logs are sawed in order of receipt except for rush orders. Generally, tho, order of deposit is the order of sawing. The logs, one at a time, are rolled onto the carriage by the aid of cant hooks. Having been properly placed, the log is clamped onto the bed of the carriage by steel spikes which are a part of the carriage. The log is then ready to be sent toward the circular saw, in this case a 50" circular saw run at 550 r. p. m. by an electric motor. On entering the log, the saw cuts easily and rapidly thru to the end of the log. One care which is exercised but which has its limitations is the inspection of the log for nails, bolts, wire, etc., which may be imbedded in the wood. Oftentimes these bits of metal are completely grown over. Striking iron in a log sometimes results in the breaking of a saw. It is usually impossible to prevent such a happening.

The bark is first removed in four separate cuts thus squaring off the log before the boards are removed. It is estimated that about 100 feet of lumber can be obtained from an average log, the estimate being taken from a 15' log figuring on obtaining 10" boards.

The boards are then planed in the planer. Four different operations may be performed by this machine. It may also be used in making groves in the wood as desired.

These two machines comprised the main pieces of machinery used in this sawmill. Both were purchased from a firm in New York City.

The lumber sawed here is used by farmers for building purposes. The sawdust, for which there is a good market, is blown thru pipes to the rear of the mill. It is used principally for bedding. Other uses are floor covering for chicken houses, for butcher shops, and for use in ice houses. The slab wood is part of the sawmill owner's profit and is used as fuel.

The owner is not concerned with storing lumber, as the farmers take it away as soon as it is ready for them. Neither is he concerned with seasoning as it is seasoned either before or after milling. The danger of its being damaged by insects or animals is of no matter to him as it is not in his possession long enough. All transportation is cared for by the owners of the logs and lumber.

Social, civic, economic—One man is employed to assist the owner of the mill. The length of day varies from 10 to 12 hours depending upon the amount of work on hand. The busiest seasons are early spring and late fall and winter as the farmers have more time then to devote to getting the logs out and it

is easier to drag the logs out of the woods as the snow permits sliding. It is also easier to saw frozen lumber.

No special training is required for this work beyond knowing how to operate and care for the saw. Skill is needed not only in sharpening the saw which is done by hand filing but also in setting the saw properly.

There are no provisions for leisure time made by the firm, it not being large enough to warrant such. In fact, there is little leisure time to use except for sleep and rest.

Compensation insurance rate is very high and none is carried by the employer.

So far as could be ascertained, no safety devices are used unless the placement of the machinery might act as such. It is understood that the saw may be stopped at any point when necessary.

There is only one sawmill in the immediate vicinity as there is not sufficient work for more. Only the making of cider and the grinding of grain are engaged in at this mill to help maintain its existence.

Margerite Lake, Member of Steering Committee
Eloise Smith, Chairman

Laura Lomax
Laura Taylor
Clair Schmitt
Ellen MacBride

After the various committees had submitted their preliminary reports the form of standard procedure for reports was considered. The method here, as thruout the project, was inductive, from particulars to generalizations. The standard procedure in outline form is presented as follows:

Part I

I. Historical background of the local commercial enterprise
   1. Reason for choice of location by founder
   2. Community needs that were filled by the establishment of this local commercial enterprise
   3. Social, economic, industrial, and religious trends indicated by the establishment
   4. Original equipment
   5. Brief record of growth of industry.

II. Present condition of the local commercial enterprise
   1. Present location (address)
   2. Description of housing facilities
   3. Description of equipment and processes
   4. Materials and sources (list sources)
   5. Products and markets (list products)
   6. Trends
      a. Changes in the local commercial enterprise to meet present conditions
         (1) Factors causing these changes
         (2) Future trends indicated
   7. Workers
      a. Number
      b. Type and residence of workers
      c. Educational and physical requirements

d. Wages and salaries
e. Economic and social status of workers
8. Employment conditions
a. Overhead
(1) Taxes, wages, insurance, compensation, running expenses, advertising, losses, depreciations.

III. Probable outlook for the local commercial enterprise
1. Summary of trends
2. Probable effects of present trends.

IV. Remarks.

The Steering Committee felt that the teachers needed to be more intelligent about world affairs. They should have knowledge of social situations and social philosophy in order to guide the child's learning activities.

Some current social problems were given as a starter. The group was asked to find out and add to this all possible topics. It was believed that this information was necessary as a background for the next step of adapting the survey material to school use. The topics listed were as follows: child labor, credit, housing, machine age, married women working, migratory labor, minimum wage, propaganda, social security, strikes, taxation, unemployment, wealth, and youth problems.

The general principle involved here is that man controls his environment thru intelligent attacks on its problems and resources, otherwise his environment controls him.

Following the presentation of reports of the various groups the Steering Committee conducted a panel discussion on the standard procedure developed in Part I of the outline. In this discussion, the Steering Committee stressed for the most part uniform analysis in the individual surveys. Attention was called to the reason for the arrangement of Item 1 of the outline wherein the psychological procedure of the classroom gives way to the logical procedure adapted to adult use, thus affording the committee members a complete picture at the beginning of the survey.

The importance of Item 2, or choice of location by the founder, was discussed. It was brought out that only two industries, cement and brick, are now bound to the source of supply. In Colonial days the nearness of the plant to the source of raw materials had decided bearing on the plant's success or failure.

Under Item 3 the fact that Delmar was established mainly as a social suburb to a city was given to show that certain enterprises sprang into being from the demands of the community which was constantly growing.

In discussing Item 4, original equipment, it was considered advisable to list equipment of the plant in chronological order of installation.

listing only the equipment found in the establishment. In determining the present condition of local commercial enterprises it was suggested that the committee confine itself to data including competitors within the territory and always to keep in mind that the purpose of the survey is to know the community.

The Steering Committee advised that subsequent meetings of each committee were to be held for the discussion of all points raised by the Steering Committee in the present meeting. Permission was given the various committees to add items of investigation to the present outline (Part I) and to divide the work as the chairmen desired.

The Steering Committee made up the following guide for the use of committees in drafting their report on the adaptation of survey material for school use:

Part II

Adaptation of Survey Material for School Use

I. Pre-plan
  A. Possible approaches to the study of the local commercial enterprise (List these)
  B. Resources available
    1. Accessible within the building
      a. Books
      b. Magazines
      c. Pictures
      d. Objects
    2. Less accessible
      a. Books—library privately owned
      b. Magazines—library privately owned
      c. Pictures—library privately owned
      d. Objects
        (1) Privately owned
        (2) In museums
      e. People
      f. Addresses of source material
      g. List of places to visit
  C. Acquired information found and recorded
    1. Example: kiln drying

At the next meeting of the Steering Committee, a member of each group was called on to describe a current trend involved in his particular survey. These are given in brief:

Bakery: Transportation facilities led people to go to Albany to do their buying. Trade areas are constantly changing.

Printing: All colored paper used in this plant now comes from Wisconsin because of water properties which help in its coloring. A transfer of source of supply occurs.

Feed: High prices of the mixture of grains led to the building of a grist mill by this company. Dispensing with the middle man.

Coal: Credit system—60 percent of the nation live on credit.

Junk: Invention—Models of all types constantly change. A higher standard of living each year.

Sawmill: Work no longer done in the home. Industrialized labor. New materials used in building.

Lumber: It is necessary to carry every type of supply. Lumber companies becoming contractors and builders.

At a later meeting the Steering Committee instructed all workers to bring together their material and a large carton for filing bulkier material, the Steering Committee to provide folders and file boxes. Each was to have a sheet listing the contents of the folder. In making this check sheet the outline (Parts I and II) and these general headings were followed: activities, bibliography, distribution, employment, government, history, letters, machinery, products, processes, raw materials.

On the completion of the file, the use of maps and other graphic materials was chosen as the topic for another general meeting. Each teacher came prepared on the following outline: (1) maps (commercial or pictorial)—those collected in survey or maps on hand; (2) graphs; (3) cartoons; and (4) articles on technics in map and graph making. The following sources for obtaining this material were suggested: the school museum and the elementary-school library; *Study Readers* by Walker and Summy; and the *National Geographic Magazine* for December 1932.

Criteria for map making—As an example of instructions developed for the compilation of materials the following outline of criteria for map making is given:

I. Maps
- A. Its use—choice made by the teacher and pupils
  - 1. For what purpose was the map made?
  - 2. Does it serve that purpose?
  - 3. Does it serve our purpose for use in connection with our survey?
  - 4. Is it to be used "as is" or only for suggestive ideas?
- B. Make-up of map itself
  - 1. Color—legend
  - 2. Size—ace level of the group
  - 3. Details—technics used in making of the map
- C. Steps in classroom map making
  - 1. Decide on purpose for which maps are to be made
  - 2. Study and evaluate other maps in light of this purpose
  - 3. Select best ideas for your purpose and work them out
  - 4. Decide on legend in accordance with what you wish to show
  - 5. Work out some definite technics for map making.

II. Pictorical Maps
- A. Should be clear and simple
- B. Should be in proportion
- C. Arrangement should be kept in mind.

III. Graphs
   A. Should tell their stories simply and clearly at a glance
   B. Should be accurate in presentation of facts
   C. Should have definite use in summarizing facts.

IV. Relief Maps
   A. One complete phase shown.

V. Textile Maps
   A. Use for decorative purposes largely emphasized to pupils.

The meetings of the next two or three months (spring of 1937) were devoted to checking, listing, and filing material, and to the preparation of a final report evaluating the individual surveys and listing findings and conclusions covering (a) worthy technics, (b) filing methods, (c) problems of contacts with people, (d) problems of research.

For the coming year (1937-38) three of the members of the Steering Committee remained; four new members were elected. At the final meeting, each committee gave a brief report. The report of the Lumber Survey is printed in full in the Appendix, see page 137. The teachers chose to follow the policy of employing the work-shop type of program with the teachers as pupils.

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Chapter VIII

CONTRIBUTIONS TO INDIVIDUAL INSTRUCTION

Winn L. Taplin and Irving F. Pearson

RURAL SCHOOLS with their enrolment divided into eight grades, each having comparatively few pupils, invite adoption of classroom practises which will allow teachers to use their time to the greatest advantage. The excessive overlapping of grades which almost invariably exists emphasizes in the highest degree the need for fitting the subject-matter to the ability of the individual pupils.

Achievement testing programs first revealed on an unbiased basis the fact that one-room schools in general, with the usual small number of outstanding exceptions, were below the standards set by urban pupils in the factual material, in the skills, and in the tool subjects of the curriculum.

Nevertheless, pupils kept on coming to the doors of rural schools each day, pupils as needy of instruction, pupils as capable, pupils of as good character and with as high aspirations as are to be found in any urban community. Their chances of achievement in the fundamental skills of education were perhaps only four-fifths of what they would be if their parents lived in the city. But what could be done to improve their educational opportunities?

Perhaps better schoolhouses could be built and create a greater feeling of security in our educational program. With better heating and ventilation the bodily comfort and perhaps even the health of the pupils could be improved. By placing the windows in better positions and making them larger the eyes of the pupils could be better protected. Thus rural school buildings were improved, some states even entering into programs of "standardization" of buildings, sometimes encouraging competition in the erection of better school plants.

An encouraging amount of consolidation came about, yet the one-room and even the two-room, three-room, or four-room rural school persisted in a majority of the rural sections. The eight grades and the crowded time schedule likewise persisted, and so did "Standpatter Jones," who was sometimes a member of the schoolboard and who did not like "newfangled" ideas in education. Pupil achievement had increased a discouragingly small amount. Pupil personality was still unsatisfactorily developed.

Many suggestions for improvement of the organization and practises of the rural schools were made: revised time schedules for classes; the doubling of successive grades in order to provide a smaller number of classes; rotation of classes in certain subjects on successive days; pupil assistants to the teacher; individual and special "adjustments" within the class; and project teaching.[1] None of these rearrangements, all of which were made within the class recitation plan of organization, was successful in solving the time problem for the teacher to such an extent that it has been widely adopted.

Urban communities have for years been developing more flexible time schedules and adequate provision for individual differences. The Dalton (Massachusetts and later New York) plan, the Winnetka (Illinois) plan, the Gary (Illinois) plan, the University of Chicago plan, and the University of Wisconsin plan have proved to be especially suggestive of the hope that an adaptation of instruction to individual needs, that an adequate revision of the curriculum, and that a flexible arrangement of the daily program might be had for the benefit of rural pupils.

Meanwhile, Fannie W. Dunn and Marcia Everett,[2] working in a rural school in Connecticut, reported very favorable instructional results from a division of the time schedule into blocks adapted alike to class recitation purposes or to individualized work. Assistant Superintendent of Public Instruction U. J. Hoffman, of Illinois, advocated individualized instruction for the rural schools of his state. Francis L. Bailey, Commissioner of Education in Vermont, suggested the possibility of adaptation of individual instruction to the conditions existing in the schools of that state in 1932.

WHAT IS INDIVIDUAL INSTRUCTION?

In brief, individual instruction means the adaptation of instructional methods to the specific needs of individual pupils as determined by achievement, intelligence, and diagnostic tests; the analysis of individual pupil records; and the judgment of the teacher as to the kind of help the pupil needs. It makes the most of the pupil's ability to learn thru self-activity. It is not equally well adapted to all subjectmatter fields or desirable pupil activities. In general, it is best adapted to the mastery of the tool subjects not involving a high degree of social cooperation as in the social sciences. This does not mean, however, that individual instruction cannot be employed in activity programs, projects, and large

[1] Special Rural School Bulletin, State Department of Education, Montpelier, Vermont.
[2] Dunn, Fannie W., and Everett, Marcia. "An Experiment in a Rural School." New York: *Teachers College Record*. 29:675-83; May 1928.

unit methods of curriculum organization. It fits very well into any of these schemes where mastery of special skills, such as spelling, fundamental operations of arithmetic, reading, technical language usages, and manual skills are needed.

A study of the operation of individual instruction, as developed in Vermont, Connecticut, and Illinois, has been made by the authors of this chapter and is here reported for the purpose of presenting examples of how this instructional technic has been developed in some rural school situations.

THE INDIVIDUAL INSTRUCTION IN VERMONT

The definition of individual instruction practises in Vermont could well be stated to be: organized adaptation of school work to the needs of the individual child as determined by achievement and intelligence tests, including individual records and promotion of the individual pupil either by subject or grade, and designed to enable each pupil to develop power to educate himself thru a greatly enriched curriculum.

Since ability grouping is out of the question because of the small enrolment in each grade in the majority of Vermont's rural schools, many of the "plans" for individualizing instruction are not readily adapted to the conditions. For the most part the Winnetka[1] plan has been found most suitable. The only major deviation from it has been a tendency to apply the application of a modified Dalton[2] grouping plan for pupils who are progressing in their work at the same rate of speed. This grouping has been used chiefly in the small rural graded schools and is negligible in the one-room buildings except in social sciences and English literature in which pupils often meet daily for discussion and appreciation of the subjectmatter in teacher-guided socialized groups.

An activities program is in some stage of completion at all times in nearly all individualized schools. The activities, of course, are group procedures. In some cases the whole school comprised a group. In other cases several activities participated in by smaller groups may be in progress.

Since credit for mastery of each goal is given to the pupils instead of letter marks, each pupil is in competition with his own best previous work rather than against his fellow in a race for "marks." The only competition is competition for mastery. In general, competition has changed to cooperation among the group. In these ways, in addition to group recreation periods, adequate socializing influences are developed

[1] Washburne, Carleton. *Adjusting the School to the Child.* Yonkers-on-Hudson, N. Y.: World Book Co., 1922. p. 189.

[2] Parkhurst, Helen. *Education on the Dalton Plan.* New York: E. P. Dutton and Co., 1922. p. 278.

with the result[4] that the pupils actually become more cooperative, rather than less as was formerly feared by some educators.

It has been found in Vermont that teachers who are planning to reorganize schoolrooms or to teach in schools where individualized instruction is already carried on should spend to advantage a year in studying the basic philosophy and the technic of adapting instruction to the needs of the individual. The publications mentioned in the footnotes of this chapter have all been useful, especially those by Parkhurst and Washburne. Other valuable viewpoints are found in the *Twenty-fourth Yearbook of the National Society for the Study of Education*, Public School Publishing Co., Bloomington, Ill.; *The Child Centered School*, by Rugg and Schumaker, World Book Co.; and *The Self-Directed School*, by Miller and Hargreaves, Charles Scribner's Sons. Much help in the preparation of "goals" and "units" of work was obtained from a study of the goal cards used at Bronxville, N. Y., and at Winnetka, Ill., and for the organization of activities from the social studies units published by the Winnetka Educational Press, Winnetka, Ill., and from the activities notebooks furnished by the World Book Encyclopedia.

A CASE STUDY OF INDIVIDUAL INSTRUCTION IN VERMONT

The experience of Mrs. Mary Stapleton, Cuttingsville, Vermont, is rather typical of the organization procedure which teachers in Vermont have used. Her statement follows and may be considered a typical case study:

In the fall of 1932 I had an enrolment of about 20 pupils in all grades. My superintendent told me about the Winnetka method, and suggested my reading some books which would be helpful in the development of this system.

During the fall and winter of 1932 and 1933 I did a great deal of research work, and in the spring I developed the technic in spelling. This is one of the easiest subjects to be individualized since one knows definitely what words are to be taught and the means of testing are simple. I divided the words into units of 25 or 30 words each according to grade placement and ability. This method tests the children on words we want them to know before they study them and allows them to concentrate on the words they miss in the test, rather than wasting time studying words they already know.

This plan in spelling proved so successful that I decided to try to develop arithmetic technic the next fall. During the summer of 1933 I was busy doing research work and preparing material to fit in with my textbooks and our state course of study. To follow this technic there are three essentials to be kept clearly in mind: (1) to know exactly what to teach—clear objectives; (2) developing complete diagnostic tests; and (3) developing self-instructive and self-corrective material which the children can work with and correct themselves. When adequate information was lacking, these essentials had to be worked out on the basis of my own experience.

[4] Taplin, Winn L. "Relative Efficiency of Class vs. Individual Instruction in Graded and One Teacher Schools." Unpublished thesis for the master of arts degree; Burlington, Vt.: University of Vermont, 1935.

To develop the first point, I collected all my textbooks together with my state courses of study and divided the year's work of each grade into 8 units, each with 3 or 4 subunits. The next problem was the development of a set of diagnostic tests covering each detail. Each test was prepared in from 4 to 6 equivalent forms, 2 or 3 to be used as practise tests and corrected by the child, the others to be real tests to be corrected by the teacher. Keeping 100 percent mastery of each unit in mind, until 100 percent is achieved, repeated practise tests and real tests were given. This required constant improving, revising, and extending. I found it helpful to exchange tests with other teachers. For a small sum I obtained some tests from Winnetka. I cut out examples and problems from old books, pasted them on cardboard, and placed them in my files. The last and perhaps the most important job was to supply the children with self-instructive practise material. Printed drill pads in arithmetic and English have been found helpful. In some cases where the grade was small I obtained the regular assignment booklet from Winnetka. We were also supplied with "Number Games for Boys and Girls" which furnished adequate drill in number facts, and this device proved effective, for the children learned the facts by games, either by solitaire, partners, or racing. A similar procedure was followed in English, with excellent results.

By the end of that year I had fewer failures than ever before. The children had begun to realize the objective of this instruction and since there would be no repeating or grades, it was up to each to progress at his own rate of speed. No child felt he was a failure even tho his year's work was not complete. When he entered the next fall he began where he left off in June.

The next summer I attended summer school at the University of Vermont at Burlington, and took the course in individual instruction from Marion Carswell of Winnetka. This was especially interesting to me on account of my experience. I received a great deal of help from her, and in the fall I developed individual reading. This is not very difficult. The first thing was to give tests in oral reading. I used Gray's Oral Reading Check Tests. Silent reading tests had already been given. These were supplied by my superintendent and thru these tests I learned each child's reading ability. Then the child was required to read books near his level. This necessitated the development of a library. This was started by the children bringing books of their own from home and by raising money to buy others. Our schoolboard, thru the superintendent, instead of buying 25 books all alike cooperated and bought 25 different ones. These were exchanged in the schools of the town giving access to 25 books instead of one. This plan has worked out very well and each fall we are presented with new reading books. This fall each school has access to about 30 new books suitable for each grade. The children are tested on their silent reading by tests, book reports, and oral reports. A certain amount of reading must be done orally to obtain expression, enunciation, and correct pronunciation; this point must not be overlooked.

The activity side of this instruction can be worked out effectively with the social studies program. This forms the best basis for creative activity. For example, an activity dealing with Indian life is an opportunity for children from the first grade to the eighth grade to make a contribution. Such is the case with many other units of work. The question that confronted me as I worked out my units was, Where can I get the material to construct these activities? This question was answered by appealing to the children. You would be surprised at the number of things hidden in one's attic that can be utilized. From the first we knew we were socializing the school thru group activity.

CONCLUSIONS INDICATED BY CASE STUDY

Mrs. Stapleton's experience[6] indicates that a pattern may be set up which allows pupils to progress in their education according to their relative abilities. The unique personality of each child is recognized. Each child may do work in each subject each day if desirable, but the recitation in the tool subjects is eliminated, substituting for the recitation a measure of self-instruction under the guidance and with the help of the teacher. Self-instruction necessitates an effort on the part of the teacher to teach all pupils how to study. The time of the child is so conserved that there is time in the daily schedule, or a part of the schedule may be set aside temporarily for the introduction of group and creative activities. Thru these activities, fusion, integration, or correlation of subjectmatter is carried on. At least one-third of the school day in a one-room school can be given to the activities program and still achieve a standard year's work or more in the measurable material of the curriculum.

The curriculum has necessarily been expended. The pupils' reading accomplishment so increased that many more books upon a variety of subjects, especially in science and literature, have been read. School libraries are augmented with little increase in expenditure because the need for sets of readers of identical content was practically eliminated above the early primary grades. Field trips, construction of scenery and costumes for pupil written plays, and construction of models are ordinary examples of the broadening curriculum under individualized instruction.

INDIVIDUALIZATION IN CONNECTICUT'S ACTIVITY PROGRAM

In Connecticut the movement toward adjusting the rural school to the individual pupil is statewide. The practise is not definitely outlined in its organization and technics but gains even more flexibility thereby. The individual teacher plans his units or projects temporarily in accordance with the changing conditions and the resources of his environment.

The unit of work is selected from real life situations, the pupil assisting in the selection. The unit, in stimulating many kinds of activities, is believed to provide for individual differences and make individual growth possible, the succession of such units providing for continuous growth and clarification of social meanings. With the unit selected, the teacher anticipates the activities which the group might carry on in connection with the unit. Pupils and teacher prepare and

[6] Much testing material made by Mrs. Stapleton is now to be had in printed form and is furnished to the teachers ready to use. One hundred percent mastery is not required of pupils of less than normal ability. Teacher judgment determines the time for administration of the tests in subnormal cases.

collect materials which will be helpful. The materials include reading matter connected with the center of interest, bibliographies on this unit and on similar units which have been taught by others, book lists, manual arts equipment, and visual equipment. All possible needs are secured or assured before the unit is attempted. A listing and evaluation of the outcomes of the unit is made when the unit is completed.

Integration is sought in the work of the unit. In the presentation of the unit, excursions, lectures, pictures, reading, may be used in dealing with the main center of interest. Discussion determines what problems arise for further study, what interests have been aroused, and what records and forms of expression in art, literature, music, or physical education the pupils wish to use. A period of research and construction is indulged in during which all possible sources and materials are utilized, all of the work being subdivided according to group interests and capacities. Discussions and reports follow; explanation of construction and research is carried on, and an evaluation and assembly of the results of the unit showing what has been accomplished is finally recorded.

The alert teacher discovers trends thru which children exhibit their interests and desires in further study. Thru guidance and leadership he holds the pupils to tasks which they have set for themselves and leads them to appropriate degrees of skill in the tool subjects without using the unit as a direct device for teaching subjectmatter. The unit thus functions to help the child understand life thru guided efforts and leads toward his fuller adjustment to his contemporary and to later problems of adult life.

In a program as diversified as this, the daily time table must necessarily be very flexible, but it still states a preferred order for activities. The typical arrangement follows:

Opening exercises, including the business of the school such as attendance, savings, records, etc.
Planning by teacher and pupils.
Project activities, including group discussion, research work, art, English, etc.
Individual help, including practise and drill in reading, number, etc.
Lectures, demonstrations, field trips, programs.
Group games, sports.

Pupil experience in visiting a laundry, running an errand to a garage, being out after dark, eating a meal at a restaurant, mending a stocking, reading a story, or observing a wild animal crossing the highway, could serve as the initial step in arousing the interest which would result in a planned activity.

Individual differences are treated somewhat incidentally thru the activities program. When the skills are developed in this way each in-

dividual is led to a realization of his own shortcomings altho no definite organization is set up to help him overcome them. Little reference to diagnostic or achievement testing is made in the Connecticut methodology as it has come to our attention. The writer's correspondence with several field supervisors[1] in Connecticut indicates that considerable achievement testing is being carried on in some of the supervisory districts and little or none in other districts. The marking system and promotion practises are not uniform but there is a distinct trend away from the letter-marking system and toward objective pupil rating. While no scientifically accurate studies have been quoted to us from Connecticut, such results as have been reported indicate that the emphasis which is being placed upon wholesome pupil personality development thru activities adapted to the individual is achieving satisfactory professional results.

THE HOFFMAN PLAN OF INDIVIDUAL INSTRUCTION IN ILLINOIS

U. J. Hoffman, assistant superintendent of public instruction of Illinois, adapted the Winnetka plan of individualized instruction to a program for rural schools. He did not subscribe, however, to the idea of individual advancement thru the grades. On the other hand, he subscribed to a program which would allow the individual to expend the breadth of his knowledge of a particular unit of study as far as his time and ability would permit.

The Hoffman plan of individualized instruction recommended that the school day be divided into quarters, and that in general the reading activities occupy the first quarter day; mathematics, the second quarter; language and literature, the third; and the social sciences, the fourth quarter. All grades were in general to study the same subjects during the respective quarters.

Time economy for the teacher was to be secured by allowing pupils in the upper grades to work by themselves as much as possible, thus releasing the teacher for more effective assistance to the younger pupils. Formal recitations characteristic of the old school were to be supplanted by occasional class meetings held when needed. Good pedagogy was to dictate the call for class meetings. If a new line of study was to be introduced, a class meeting could most easily and effectively make the introduction and clear the assignment. Class meetings would also serve effectively when the findings of a class member were ready to be pooled for the good of all. And again, class meetings might be held for the purpose of reviewing and testing the mutual findings.

[1] The writer is indebted to the following field supervisors and assistant field supervisors of rural instruction for helpful contributions: Martin B. Robertson, Willimantic, Conn.; Florence Battle, Willimantic, Conn.; Edwin D. Flood, Naugatuck, Conn.; Margaret Gustin, Unionville, Conn.; Bess L. Crofoot, Canaan, Conn.

The new emphasis stressed effective and directed study. By the elimination of many "recitation" periods, study periods were lengthened. As study periods were extended the more brilliant pupils were enabled to engage in much additional study and activity related to the minimum required unit of study. Indeed, each pupil was to be challenged to the limit of his time and ability. In the meanwhile, the less gifted pupil was to master the minimum essentials required by the school. In this effort he was to have the more effective assistance of the teacher because of his freedom from the necessity of "hearing recitations" daily.

The individualization of the rural school program then was to be effected thru a new emphasis upon effective study at the expense of the old formalized recitation. The course of study was to be a course of study in fact, not simply a course of instruction. It was to be directed to the pupil and built in the light of his needs. It was to challenge him to study more efficiently, to experiment, to survey, to read extensively, and to work with others, inside and outside of school, in gaining as much information about the subject being studied as time and ability would allow. Textbooks organized for the pupils were recommended. Ample library, maps, and experimental equipment were to be characteristics of the new school. All appointments were to be made toward the end that each child might learn thru effective, interesting, and self-willed study.

The new procedure requires effective planning on the part of the teacher. It means that he must not only be familiar with the required minimum essentials or step-by-step requirements but that he must have such imagination, vision, and initiative that will continually challenge each child to undertake effective study and individual and cooperative activity. The child must be directed from the minimum unit into a wide field of related study, experimentation, and socialization, only to come back again to the point of departure with a wealth of material and knowledge which he shares with other members of the class to the point of their respective absorption limits.

Rural schools using the Hoffman plan effectively find that their pupils are continually interested, and because of that fact there is little or no disciplinary difficulty. Indeed such a school is a veritable working laboratory with each pupil diligently applying himself to his appointed and self-recognized task, seeking all the information he can, and evidencing a great desire to share his findings with others. There is also evidenced close cooperation in sharing the search. All efforts combine to produce a student who is resourceful, intelligent, cooperative, and well informed.

From the point of view of the teacher the Hoffman plan first of all places great importance upon the effective planning of the work. In

the second place, the teacher is happier in his work, for he is not confined to the narrow, formal, and restricted service current in the old school. He feels that he has an opportunity to employ practically every modern bit of teaching technic and procedure. He shares the joy of discovery and success experienced by his students. He is supremely happy in his knowledge that his pupils have not only mastered the required items but have benefited by gaining a wide scope of related knowledge.

In passing, it is well to remember that the Hoffman or Illinois plan of individualized instruction for rural schools does not advocate or employ the total abstinence from socialized procedures. In fact, there is more "group" work, more cooperative planning, more mutual experimentation and research, and greater socialized "recitation" in an effective individualized rural school than in the typical traditional school. In fact, the only thing that is individualized under the Hoffman plan is the opportunity for each child to extend his knowledge to the full limit of his individual resources.

The Hoffman plan emphasizes the need for the presence of adequate modern classroom equipment. Much supplementary and encyclopedic material should be available. Movable chair desks lend themselves most easily to use where socialized activities are involved. A work bench and tools, a project table, plastic materials, etc., are used to advantage. Modern textbooks, child-centered and child-concerned in their organization and presentation, are essential helps. Any material which helps the pupil to expand his knowledge in related study and activity is worthy of inclusion in the equipment of an "individualized" school.

Unfortunately, the Hoffman plan has not been widely introduced in Illinois. Only at a comparatively recent date have the teachers colleges of Illinois recognized the plan. The great majority of the rural schools of Illinois still follow the more formal and restricted procedure of the old school. However, as new teachers invade the rural field from modern teachers colleges they bring with them the gospel of the new school, a school organized for the pupil and not for the class, the teacher, or a formalized course of study.

INDIVIDUAL INSTRUCTION IN THE MIDWEST

The writer corresponded with many rural educators thruout the Midwest requesting them to record their evaluation of certain attributes of the individualized instruction procedure. It was generally agreed that the method was most generally used and successful in the subjects of arithmetic and spelling. It was also generally recognized that pupils study more effectively under the individualized technic and that there is greater opportunity for the teacher to employ modern teaching

methods. The grouping of subjects for all grades into time schedule blocks is the next most frequently mentioned characteristic. The socialization procedures were the last listed as attributes of the individualized instruction method.

A recent development in certain areas of Michigan and Illinois emphasizes the individual to the extent that his very freedom merges his individuality in the common pursuits. Certain rural schools operating under the auspices of the Kellogg Foundation and the direction of Northwestern University have discarded all formalized procedure, subjectmatter, etc., in favor of a child-centered school which abandons all classification and ordinary organization, toward the end of centering all activities about pupil-suggested units or areas of study. The experiments have not continued long enough to warrant final conclusions, but the adherents to the plan report great enthusiasm on the part of teacher, pupils, parents, and all others concerned. They claim that the fundamentals are taught as effectively, and that in most subjects the pupils exceed achievements of the traditional or individualized school.

SOME CRITICISMS OF INDIVIDUALIZED INSTRUCTION

Correspondence with rural school leaders in several states has revealed several criticisms of the method and technic of individual instruction. The validity of some of these criticisms depends largely upon the educational philosophy accepted as valid and some are expressions of mere expediency. All of them serve to place the advocates of individual instruction on their guard. The chief criticisms of a negative nature are:

(1) Under this plan the young child loses enthusiasm.

(2) Carried to the extreme, individual instruction results in lack of cooperative activities and attitudes.

(3) The competitive attitude cannot be instilled if there is no person with whom to compete.

(4) Varied ability and training of rural teachers make it difficult to carry out this plan effectively.

(5) It is difficult to establish this plan of instruction in a community where the board and parents are unwilling to allow the teacher to make changes in the school program and break down grade lines where it seems necessary as indged by the results of a testing program.

(6) One of the most timely warnings regarding the administration of a program of individual instruction has been stated by S. A. Courtis, School of Education, University of Michigan, in a letter to the authors: "In my judgment, most of the subjectmatter individualization devices on the market are a delusion and snare. The workbook, unit lesson, practical exercises, etc., even when designed for complete individualization of activities leading to the acquisition of knowledge and skill become instruments for defeating the goal of individualization when they are used by teachers who do not understand what it is all

about. The most important thing about any program of individualization is the training of the teacher both in theory and practise.

"Individualization is suitable only for those types of developments which involve individual activity such as adding, reading, writing, composition, etc. There is another side to education also, the social side, involving cooperation, and group work. The school which had only individualized work, would in my opinion, be a menace to the community."

CONCLUSIONS

This study of programs of individual instruction, as they are in operation in Vermont, Connecticut, and Illinois, points to certain conclusions which seem from so brief a survey to be acceptable, tentatively at least.

1. The results apparently gained in Vermont schools using a plan of individualized instruction are:

(a) Greater proficiency in the measurable portions of a child's education, the improvement being greatest in those subjects which involve reflective thinking.

(b) Pupil interest in school work has increased noticeably under the individualized plan as compared with traditional class instruction.

(c) Creative and broadened cultural and life-enriching activities for which no time under the traditional class recitation plan could be found have been successfully introduced.

(d) Pupils' power to do things for themselves has developed thru better study habits.

(e) No lack of social development has resulted from increased individual efforts.

(f) After the reorganization period is passed, the satisfaction of both pupils and teacher is increased.

2. It has been demonstrated thru the program carried on in Connecticut that the individualization of instruction can be coordinated with a curriculum program based largely upon group activities.

3. Newer plans for organizing the instructional program of small rural schools have not been instituted in a majority of Midwestern communities. The traditional highly formalized rural school is still largely prevalent. Nevertheless, the Hoffman plan and similar arrangements have been successfully tried in many rural schools.

4. Rural school procedure is headed toward a change which very likely will be a compromise between great extremes—a compromise which will at once recognize the necessity for certain goals of achievement, provide for individual differences, include socialized technics and allow greater elasticity in method, all of which will demand better teachers, better equipment, and better vision of the possibility of improving instruction in rural schools.

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[1] This list of references was compiled by Kate V. Wofford, State Teachers College, Buffalo, N. Y.

Chapter IX

SOCIALIZATION OF THE SCHOOL PROGRAM

Kate V. Wofford

SOCIALIZATION, at least for the purposes of this chapter, is accepted as being the educational process by which children arrive at intelligent citizenship in a democracy. All discriminating teachers are aware of the desirability for socializing experiences which achieve this goal, but those who teach in small schools know the necessity for them. This necessity springs from two causes: one is the rural child, himself, and the other, the school program.

The rural child.—Unfortunately, it is difficult to present a clear picture of the child who attends a small rural school as contrasted with children who attend large schools. Few studies have been made of him and those available are too sporadic and too isolated to tell what manner of child he is. The White House Conference on Child Health and Protection[1] gives valuable information about him, particularly in the field of health. The Iowa study of farm children by Baldwin and others[2] helps to piece out the picture, not only in health, but in his interests, his activities, and the assets and deficiencies of his school and home environment. Witty and Lehman[3] have reported on his collecting interests, Rabold[4] and Peters on how he differs from children attending town schools, and Dawson on the conversational preferences of urban and rural children.[5] While these studies report on isolated features of rural children, when placed together persistent characteristics in all are revealed. For example, Mildred Dawson reporting on the conversational preferences of town and country children states the significant features of the assembled data to be the similarity of the preference of the two groups. However, the restricted lives of the rural children tended to turn them to the more serious topics of radio programs and books since these ranked higher with rural than with urban children. This indicated to Miss Dawson that the lives led by rural children give them "a more vital contact with serious occupation and work."

[1] White House Conference on Child Health and Protection. *The School Health Program: Report of the Committee on the School Child.* New York: Century Co., 1932.

[2] Baldwin, Bird T., and others. *Farm Children.* New York: D. Appleton Co., 1930. 357 p.

[3] Witty, Paul A., and Lehman, Harvey C. "The Collecting Interests of City and Country Children." *Journal of Educational Psychology* 24: 170; March 1933.

[4] Rabold, C. N., and Peters, C. C. "How Country Pupils Differ from Town Pupils." *The Journal of Educational Sociology* 3: 297-306; January 1930.

[5] Dawson, Mildred A. "Children's Preferences for Conversational Topics." *The Elementary School Journal* 37: 429-37; February 1937.

Witty and Lehman in a consideration of the collecting interests of children discovered that country children collect many more objects than do city children. The study further states that collecting is regarded as an individualistic, competitive activity, and that an individual engaged in it works alone. The study states:

> What effect this individualistic, competitive type of behavior is likely to have upon numerous attitudes of the rural child is a matter of conjecture. It seems plausible, however, in the light of the laws of habit formation, that the collecting endeavor of the rural child might make of him an individualistic adult.

In the somewhat comprehensive study of farm children in Iowa, reported by Bird T. Baldwin and others, the chief characteristics of those attending the one-room school were aloofness, timidity, and awkwardness. The younger children observed tended to run from strangers, and the older ones seemed to suffer embarrassment when addressed by a visitor. While these few studies do not definitely prove anything, they tend to support the experience of rural teachers. There are few rural teachers who have not had to deal, at one time or another, with children who were shy, timid, reserved, and who evidenced strong emotional reactions in the presence of unexpected visitors. The experiences of teachers and the results of studies seem to indicate the need for socializing experiences which develop in children poise, self-assurance, and the ability to cooperate with others. Witty and Lehman present the case for the rural child in the following succinct statement:

> A foremost objective of the modern school is expressed by the single word "socialization." This being the case, it seems plausible that, if interest in collections is a fair example of his generalized behavior, the rural child is even more in need of a socialized school program than is the town child. The frontiersman, the pioneer, and the farmer have undoubtedly lived in environments that made for individualistic outlook. Their children have also been subjected largely to similar influences. But if the modern child is to live his adult life in an urbanized environment, it is necessary that he learn cooperation.

Participation in intelligent, cooperative activities is an essential in a democracy, and the educational process which prepares for it cannot afford to ignore the deterrent personal deficiencies of the pupils in the program.

THE SCHOOL PROGRAM

The early pioneer school was an unclassified one. This practise was necessitated by the fact that children entered school whenever they could and remained as long as they could. In this period, the law of survival drove hard bargains with children so that formal education was frequently sacrificed to the "planting of crops." The school adjusted to these conditions by keeping the organization simple and the instruction individualized. Children entered school at any time during the year and merely took up learning where they had previously laid it down.

They usually found their places in school by their ability to read so that a child would answer, if questioned, "I am in the third reader," rather than as now, "I am in the third grade."*

Reforms in the organization came in the educational reform following the report of the Roosevelt Country Life Commission in 1908, and unfortunately the reform, in this instance, was worse than the evil which it attempted to alleviate. In an attempt to "modernize" the school, educational leaders made a mistake, subsequently to be repeated many times in the rural field; they attempted to fit an urban pattern to a rural situation. In 1908 the classification of urban children by grades had been largely accomplished, and, as an administrative device, was apparently successful. Rural schools were classified by the same standards, and in some states the term "graded" when applied to rural schools connoted progress and brought approval.

Conditions in the rural school resulting from the practise were not altogether successful. Teachers, under the system, found themselves teaching eight grades, each averaging four recitations a day, so that faced with forty daily lessons, teaching degenerated into a deadly routine of "hearing lessons." Under this system the children fared no better than the teachers. They recited in closely graded classes with only two or three children, and not infrequently one child composed a grade. Short recitation periods were spent with the teacher, at which time children gave back to him what they had learned from books during the long study period.

Little effort was made to secure the cooperation and the participation of pupils in the life of the school. In fact, such participation was frowned upon as a menace to "discipline." Authority rested in the teacher and he usually used it like a benevolent despot. Children asked for and secured permission to move about the room, to speak to another pupil, to use the dictionary, and in truth to engage in all activities not set by the daily program. The schoolroom thus represented an aristocratic form of government which, incongruously enough, was supposed to prepare children for a democratic social order. Thus the traditional school tended to emphasize those inherent deficiencies in rural children: the tendency toward individualism, toward non-cooperation, and toward feelings of inferiority. This combination of difficulties, when augmented by competition, a third characteristic of the traditional school, held little promise for the development of cooperative endeavor, the very cornerstone upon which a democracy rests.

* Wofford, Kate V. *A History of the Status and Training of Elementary Rural Teachers in the United States in 1860-1930.* Pittsburgh, Pa.: Siviter Press, 1935.

A NEW PHILOSOPHY OF EDUCATION

The practises of the traditional school, described in previous paragraphs, were so bad that reform movements were set in motion to combat them. These movements sprang from a new philosophy of education which conceived the educational process to be more than book learning and teaching more than the "hearing of lessons." Education was no longer confused with "schooling," but was seen as a more comprehensive program which included all of the experiences had by children both outside and inside the school. Under this conception, the curriculum achieved new meanings and the community fresh educational possibilities. Children acquired a new significance in both the learning and the teaching processes. In the past, the school had been almost wholly concerned with the intellectual development of children. Health, physical and emotional, was of little concern to the school, except as variations in it might interfere with learning. The new philosophy of education, however, saw the child as a whole and learning as a reaction of the total organism to its environment. Teachers in the new movements in education believed that the learning of a child was affected adversely if he were ill, unhappy, or non-cooperative, and results in scientific research have tended to corroborate this belief. New educational practises have followed research and philosophy, and the small rural school has greatly profited from them, especially during the past decade. It is the purpose of this chapter to report a few of the practises which have encouraged the process of socialization in the small school—that process by which children work cooperatively toward common goals.

SOCIALIZING THE SCHOOL THRU DEMOCRATIZING SCHOOL LIFE

One of the first steps taken to socialize the life of the school was to organize it for democratic living. This has been achieved in many modern schools thru practises based upon the philosophy that children learn to be good citizens in the future by being good citizens in the present. The school with all of its experiences, therefore, becomes a laboratory in which children develop for successful living in a democracy. On the whole, it is not difficult to distinguish the school which operates under a modern conception of education. It is evidenced by the intelligent use of freedom by children: in their freedom for movement about the room, by their working in unsupervised groups, and by their ability to handle many problems of group management. These technics are frequently developed thru school clubs whose membership may include all of the children of the school. Experienced teachers who have attempted to establish successful democratic school organizations have set up various objectives toward which the group works. Some of these are: (a) to make the school a better and a happier place

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in which to live and work; (b) to develop leadership and followship in students; (c) to develop technics thru which democracy can function; (d) to develop responsibility in children to the point of personal and group control; and (e) to work steadily toward all the self-government of which groups are capable.

The school club offers the framework in which children work toward these objectives, and they are attained thru activities engaged in by children. These activities are similar to those in life outside, and usually include: (a) activities which deal with the problems of group control both inside the schoolroom and on the playground; (b) activities related to the health of the group, such as preparing and serving the hot lunch, ventilating, heating, cleaning, etc.; (c) civic activities including the beautification of the school ground and schoolhouse; and (d) activities in recreation, under which are listed the proper use of recess periods, school parties, mothers' teas, etc.

Fortunately, the small rural school is rich in possible activities for the development of socially-minded, cooperative individuals. The educational possibilities which lie in the housekeeping routine of the average small school is an excellent illustration. Under an older conception of education the lack of janitorial service was deplored as a deterrent in the educational process. The modern teacher, however, sees this deficiency as an actual asset, since it gives opportunity for the development of individual responsibility for the welfare of the whole group. Serving the hot lunch is another example. A few years past it was difficult to persuade teachers to make this a part of the school program, largely because of the plea that no time was available. Today, the preparation and the serving of the hot lunch is not considered a duty of the teacher, but an opportunity for the children. The activity provides an opportunity for group work, for the development of responsibility, and for making the lunch hour a social as well as a health project. Practises in the socialization of the school depend in no small measure upon the teacher and his philosophy of education.

SOCIALIZATION OF THE SCHOOL THRU THE ACTIVITY UNIT

Another effort to socialize the school was the reorganization of the grades into groups and the construction of a curriculum to meet the needs of the groups, by alternating years. These changes appeared to meet the needs of the small school at one time: it placed children into larger social and working groups, it reduced the number of classes, and it tended to revitalize the curriculum. However, this organizational device merely provided the groundwork for the socialization of the

[1] Reports of this reform were made in some detail in: *The Organization of Curriculum for One-Teacher Schools*. Bulletin, 1923. Washington, D. C.: Department of Rural Education, National Education Association, 1933. 44 p.

school. Upon the classroom teacher devolved the real responsibility for the promotion of cooperative effort. Efforts to meet this responsibility have taken many directions. One of the most frequently used is the substitution of the activity unit for the recitation.

In the recent *Instructional Guide for Elementary Schools*, issued by the Michigan Department of Public Instruction, the activity unit is described as follows:

> We have chosen the term "units of work" and as herein used it refers to those larger learning situations organized around child interests, such as the home, the community, the farm, transportation, communication, pioneer life, people of other countries, and so on. Such units of work provide opportunity for many kinds of experiences typical of life activities such as reading, listening to people talk, seeing things, doing work both mental and physical, making things, problem solving, discussing our ideas and opinions with others, asking questions, playing games, and participating with others in a great variety of cooperative enterprises.[1]

In many sections of the country the unit of work as a technic of teaching is widely used, and describing the procedure here may appear as a "twice-told tale." However, the practise, unfortunately, is limited to a few progressive states, and even in these many of the teachers are bewildered by the process. On the other hand, there are many good books which give the new point of view in education, and in states where no leadership is provided there are progressive teachers here and there who are making their schools "child-centered." Because of these facts and because this chapter is supposed to report the newer practises in the socialization of the rural school, it is not possible to ignore the unit as a technic of teaching and organization. There are many variations possible in the use of the unit. The technic may be adapted to the use of a single group, it may be used with several groups, it may be employed with all the children of the school. The latter use is designated as the "perpendicular unit." Because it is the most difficult of initiation and development, and because it involves the whole school and hence offers rich opportunities for the socialization of children, the plan is herewith presented.

A perpendicular unit is one which extends downward thru the grades, includes all children, and cuts across many levels of achievement. It may be used in a one-room school of eight grades or in a system employing many teachers. One of its assets, as with all types of units, is its adaptability. For it, the school is organized as a whole and the children work on the problem in committees, as in life outside, thus ignoring all grade lines. Each child selects the committee which most interest him and on which he and the teacher think he can best serve.

[1] Michigan. Department of Public Instruction. *Instructional Guide for Elementary Schools*. Bulletin 319. Lansing, Mich.: the Department, 1936. p. 54.

Courtesy of W. A. Thomas, Buffalo, N. Y.

An activity in a one-room demonstration school, culminating in a school fair, summer 1937. State Teachers College, Buffalo, New York.

It is desirable, however, that he work on his own level of achievement. For example, we could not expect six-year-old children to select the Committee on Research in a local history unit, but they might presumably assist in the assembling of an exhibit of Colonial times. One of the cooperating rural schools of the State Teachers College at Buffalo developed such a unit in local history, and the committee memberships fell naturally into interest and achievement levels. The older children —those in Group A—Grades VII and VIII—assumed the responsibility for the research for the unit. They read local histories and diaries, interviewed old residents, and assembled their materials in reports which they gave to the whole school, usually in the first hour of the morning. Group B—Grades V and VI—undertook to write the pageant depicting in pantomime, dialogue, and dancing what Group A had given in reports. Toward the culmination of the unit, Group A assisted with the pageant and made nearly all of the costumes for it. In the meantime, Group C—Grades III and IV—assembled an exhibit. This included old books, warming pans, tallow dips, cooking utensils, diaries of three wars, old firearms, etc. Each article was accompanied with a description which told something of its history, its use, and why it was superceded with other articles which better serve the present generation. Group D—Grades I and II—assisted with the exhibit. As was anticipated, the children in this group were most interested in the Indians of the earliest history. Consequently, they used their sand table to construct an Indian village, and since their school was located in a section rich in Indian relics they were able to assemble a creditable exhibit of tomahawks and arrowheads. While each committee was busy doing things, the children also found it necessary to read many books to learn if their activities were correct. For example, Group B found it necessary to study pageantry in some detail before the local history could be put into proper sequence and into adequate dramatization. Opportunities, in this unit, for the development of cooperation, leadership, initiative, and other desirable assets were many. They are found in the committee type of organization, in the assumption of definite responsibilities by individuals and by groups, and the necessity for fitting these mosaic responsibilities into a workable whole which culminated in an exhibit and pageant worthy of public presentation. The successful culmination of the unit was a good illustration of the cooperation of the individual in the interest of the group.

A further characteristic of the perpendicular unit lies in the fact that participation in it draws from many subjectmatter fields. The local unit, cited above, illustrates the point. It would have been impossible, for example, to complete the unit merely by studying history. In order to solve the problem about the local community and its people, the children

found it necessary to go into many subjectmatter fields—into geography, because the local environment had greatly influenced the type of people who had settled there; into the customs and dress of the people because a pageant should present true as well as picturesque facts; into art because well-established principles set the pattern for costumes and exhibits; into music because this is a medium for understanding history; and into the dance, because it, too, reflects sociological trends. Subjectmatter was used because it helped children to solve their problems, not because it was valuable per se.

A third characteristic of the unit is that it is usually closely linked with community life. This is in harmony with the modern philosophy of education which attempts to make the educational process lifelike. The unit described in previous paragraphs also illustrates this characteristic. The children needed to go to the community for much of their information—to local residents, to the village library, and to the homes of the neighborhood. Personal contacts of children on school business were not the least of the desirable learnings resulting from the unit.

SOCIALIZATION OF THE SCHOOL THRU PARTICIPATION IN COMMUNITY LIFE

One of the distinguishing characteristics of the modern school is the close relationship which exists between the school and the community. This relationship is more than the cooperation of home and school; it is that and something more vital and significant. The relationship can, perhaps, be best understood in the nature of the activities which it takes. Under the new ideology of home-school relationships, parents frequently become active participants in the educational process. It is, therefore, not unusual to observe mothers teaching sewing in the small school, discussing trips to distant places, assisting with the hot lunch, sponsoring a 4-H Club; indeed, engaging in all manner of school activities in which they can make a genuine educational contribution. Fathers are equally helpful and versatile, and their activities are frequently impressive, running the gamut from teaching the use of tools to sponsoring a star-gazing expedition!

A further activity in the new relationship is observed in the increasing tendency to draw upon the community for teaching materials. This is evidenced not only in those activities described in the local history unit, but also in the fact that much of the recent assembling of curriculum materials begins in the local environment. The new Virginia *State Course of Study for the Elementary Grades* is an excellent illustration of this trend.[1] Obviously, the local approach to curriculum materials

[1] State Board of Education. *Tentative Course of Study for Virginia Elementary Schools.* (Grades I-VIII.) Richmond, Va.: the State Board, 1934. (2 vols.)

requires cooperative efforts on the part of children, teacher, and the community.

A further trend is the increasing tendency of children to participate directly in community activities. A national survey of such activities was made in 1936 and the report of them was impressive.[11] Children were reported as cooperating in the promotion of community health, in the promotion of civic arts and beauty, in campaigns for public safety, in the conservation of wildlife, and in the improvement of agricultural and industrial practises.

In 1935, fifty rural teachers enrolled in the summer school session of the State Teachers College at Buffalo were asked to list the community activities in which their students had engaged during the past five years. Fifty-six different projects were listed covering wide ranges of community interests. These included assistance to parent-teacher associations in the Summer Round-Up of children, the sponsoring of a wildflower show, the initiation of bee culture into a community, in cooperation with the 4-H Club, landscaping school and church grounds, provision of safety patrols at school crossings, assisting with the parking problems at community meetings, and the care of young children at mothers' meetings. Every rural community has its own local needs, and any teacher with imagination and initiative can, with the assistance of children, inventory and assist in meeting them.

The rural school is peculiarly well suited to the direct participation of children in community affairs, and for three reasons. In the first place, the homogeneity of the rural population and the simplicity of the community structure tend to make each individual in it important. Further, each individual is nearer to the authority which corrects community difficulties than are the men in the cities. Children share in this feeling of individual responsibility to the community thru contact with their parents. In the second place, children are socially and economically more important in the country than in the cities. One measure of their importance is the relatively high birth-rate in the country, another is the part children play in rural life. From an early age children earn their own board and keep. Each has his own tasks; he fills the wood box, assists with the housekeeping, milks the cows, tends the garden, and helps with the crops. He is an economic asset, which partly explains the high birth-rate in rural areas. Because he is a co-worker in a cooperative enterprise he participates in family councils. He is accustomed to assist in planning the week's work, his suggestions receive attention, and as he grows older he influences the decisions for the group. Finally, the rural child attends community meetings with his parents in a manner foreign to most urban children. He attends

[11] Hanna, Paul R., and others. *Youth Serves the Community*. New York: D. Appleton-Century Co., 1936. 303 p.

the meetings of the parent-teacher association because either the children must attend with their parents or all must stay at home. He, therefore, is cognizant of community problems and frequently takes part in programs which look to their remedy. The rural school which attempts to link education with life has, without effort, well-established cooperative family patterns upon which the larger community activities can be built.

INDIVIDUAL INSTRUCTION SHOULD ACCOMPANY THE WORK OF THE GROUP

This chapter has presented the thesis that group instruction should be emphasized in small schools. It is well to keep in mind, as Taplin and Pearson point out in Chapter VIII, that in all plans for socialization, attention to the growth of individuals is also desirable. There are two reasons for this emphasis. In the first place, there is a wide range of abilities within the confines of a single-age group, and education can proceed only within the ability of the individual pupils. Parents and teachers have been always aware of the individual differences in children. Within the span of a single-age group some children are tall, others short; some fat, others lean; some bright in reading and dull in music, others bright in mathematics and dull in all other subjects. Recent educational research has revealed to what lengths these differences go. It has been discovered, for example, that within an average sixth grade there will be children of third-, fourth-, fifth-, and seventh-grade abilities. As yet no grouping of children has been devised which puts children of similar abilities together. Nature has endowed each of us individually, each with the gifts peculiar to himself, and schools cannot ignore the fact. Consequently, the modern teacher makes adjustment to two important needs of children: the need for working in social groups, and the need for the development of the individual to his highest capacity.

The socialization practises presented in this chapter offer large opportunities for individual development. The first practise—that is, the democratizing of the school thru the participation of children in school management—is achieved almost wholly thru the effort of individuals. In the matter of keeping the schoolhouse warm, for example, the child assuming the responsibility for the stove or furnace must perform his work efficiently or he and his whole group will suffer. Upon his standard of individual achievement rests the welfare of the group. Student participation can be measured in all activities, and the group should be encouraged to weigh and judge individual performance in terms of results.

While the unit is fundamentally a group activity it also lends itself

to individual teaching and learning. Indeed, many of the activities are individualistic. Reading is nearly always an individual activity as is much of art and construction work. Reports are frequently individual but are made to the group for its approval or rejection. In the description of the unit given above the many opportunities for individual instruction and participation are obvious.

Participation in community life is also rich in opportunities for individual development. An examination of the Hanna report on the Service of Youth to the Community is a record rich in the work of individuals. The 4-H Club program, which closely ties itself with the life of the community, is comprised of the projects of individual boys and girls. That the individual is also a part of a group only makes the program stronger. Individual development and group service go hand in hand, the successful development of each depending upon the other.

Summary—Socialization of the school is approached, in this chapter, as an educational process by which children arrive at intelligent participation in a democracy. The thesis is presented that two serious deterring factors are present in the small rural school which make the attainment of the goal difficult. These factors lie in the nature of the rural child and in the organization of the school which serves him. Available studies indicate that the rural child has tendencies toward individualistic behavior, a tendency at variance with cooperative effort, which is essential in democracies. Moreover, the rural school program in the past has tended to emphasize, rather than to correct, this tendency. Fault in the program has rested in the closely graded system of classes in which children worked in small groups or alone; and in the systems of autocratic school government set up by the traditional teacher, bent upon "good discipline."

A new philosophy of education has developed new practises in the rural school, and these in turn give promise of relief at the most distressing points. Three trends in these practises are presented in this chapter: (1) the socialization of the school program thru democratizing the life of the school; (2) socializing the school thru the substitution of the group activity for the recitation; and (3) socializing the school thru the participation of children in community life. A suggestion is also made that opportunities for individual development should accompany the socialization school programs. Analysis of the three plans presented indicate that each lends itself to both purposes. The teacher who seriously attempts to make his school a place where children develop into good citizens will no doubt profit from an experimentation with these practises.

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APPENDIX

Report of the Committee on Lumber: An Illustration of Assembling Materials for Teaching

HISTORICAL BACKGROUND

A. *Delmar Lumber and Builders Supplies, Inc.*

1. When was the company formed? April 1, 1929.
2. What was the reason for this particular location?
   Mr. Bennett owned the land. It was large enough and suitably located.
3. Who owned the first lumber yard in Delmar?
   None before the organization of the Delmar Lumber and Builders Supplies, Inc., now owned by D. Bennett and A. Rowe.
4. When did the company incorporate? April 1, 1929.
5. What community needs were filled?
   The community was growing rapidly; a building boom was the result, thus the need for lumber and builder supplies.
6. What power was used?
   No power necessary, no millfirm carries stock lumber; retailer only.

B. *E. F. Crannell Co., Inc.*

1. When was this company formed?
   Started by four Crannell brothers in Albany, 1849. Elsmere branch opened by one brother in 1916 (E. G. Crannell). Taken over by E. F. Crannell Company of Albany in 1920. It is now operated thru the Albany office as one company.
2. Where was it erected? Present site: Delaware Ave.
3. Who owned the first lumber yard in Elsmere? E. G. Crannell.
4. Was it incorporated? Yes (date uncertain).
5. What power was used then? Now? No power needed, company retails only.
6. Is the company incorporated now? Yes.

PRESENT CONDITIONS

1. What is the present location of enterprise?
   231 Delaware Avenue, Delmar, New York.
2. What is the acreage? About three acres.
3. Number of buildings and dimensions?
   Four sheds: two sheds 22′ x 100′, one shed 60′ x 80′, one shed 16′ x 16′.
4. What local trees are used for lumber?
   (Albany County and New York State) White pine (principally), hemlock, spruce (very little, but some), maple and oak (usable but not extensively), cedar and locust (posts).
5. What is the most expensive local lumber?
   White pine virgin tree when graded—very little grading is done locally.
6. Are trees cut according to age or size?
   Usually according to size—but age and size correspond (that is, older trees are larger).
7. What is the average time required to kiln dry lumber? Air dry?
   Kiln drying takes from seven days to two weeks. Air drying takes from three to six months.
8. Does time required for curing of wood vary?
   Hard wood requires a longer time.

9. Is air dried or kiln dried lumber more durable?
Kiln dried is best to use for most things.

10. Is lumber ever dried in the log?
Very rarely, because logs depreciate, become wormy. On rare occasions it is done for veneer for use in making violins and some furniture. Very expensive wood, because it requires a great deal of time to cure. The curing process is done under water.

11. Kiln drying of lumber? See end of this report.

12. Air drying of lumber? See end of this report.

13. What are the standard sizes of lumber?
Widths 2″ to 12″ ordinary stock; widths 12″ to 48″ cypress and redwood (wider in redwood); lengths 8′ to 24′ ordinary stock; lengths 24′ to 48′ long leaf pine (long leaf yellow pine can be bought up to 80′ in length).

14. Do sizes vary in different kinds of lumber? Yes, see number ten.

15. What is the average length of a log to be sawed into lumber?
Sixteen feet. Canadian spruce market cuts in odd lengths; also United States hard woods.

16. What size lumber is in the greatest demand?
Lengths 8′ to 16′. Widths 8″ to 12″.

17. From what parts of logs do we get various cuts?
Best—outside boards of butt logs. Inside cuts and upper logs are knotty.

18. What kind of lumber has fewest knots? Most knots?
Butt logs have the fewest and top logs have the most.

19. What kinds of lumber are imported and where from?

Redwood—California
Spruce—Canada
Cedar shingles—British Columbia
Hemlock farming—Oregon and Washington
White Pine—Idaho
Ponderosa—California, Oregon, and Washington (ops. ie of white pine)
California and sugar pine—California
Yellow pine—Georgia, Florida, Texas, Mississippi
Oak flooring—Tennessee

20. What materials are available at lumber yards besides lumber?
A complete line of builders' hardware, painters' and masons' supplies.

21. Do knots decrease the value of lumber?
Yes; imperfections in lumber lowers value and price. White pine knotty lumber is one exception, because it is in demand for use as paneling and trim, thus higher priced.

22. Is lumber dried in log, more or less valuable than that dried after sawing?
It is more valuable because time required for drying is much longer and a special process and much care is necessary. (see number seven).

23. What are the means of transportation?
Bulk of lumber comes by ship to the Port of Albany and trucked from there to yard. This is cheaper than by rail.

24. Do you do your own trucking?
No, hire trucks (prices are F. O. B. to Port or Delmar car siding).

25. Are you incorporated with other means of transportation?
Railway, but very little is brought in, in this manner.

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26. What part does the Interstate Commerce Commission play in regulating the transportation of lumber?
It regulates freight rates, so that producers shipping similar products are not penalized by geographic location. United States is divided into freight territories.
27. How did prices of lumber compare then (1929) with now (1937)?
Lumber was higher than it is now. But there is a periodical fluctuation in the price of lumber, for example, in the past six months the price has gone up.
28. What do you believe is the cause of this periodical fluctuation in price of lumber?
The present higher price is due to the marine strike which was in the offing and the canning companies got in ahead and bought up. However, the yearly fluctuations are due to the fact that in the fall the lumber yards on the East Coast must stock for entire winter. Consequently demand is greater and thus higher prices. The same is true in spring. During the summer logging, the prices go down.
29. Does reforestation keep lumber prices high or low?
Reforestation should keep prices relatively stable, but it is not practised in the United States to much extent.
30. What are possible future trends of local enterprise?
To further complete their builders supplies, there is a possibility that the company will add a complete line of electrical fixtures and wall paper.
31. What is the general trend of national lumber companies?
The general trend of all lumber companies all over the United States is to become contractors and builders.
32. What is the cause and effect of this trend?
Possible cause, if we must finance the contractors today, as we do, we might just as well become contractors and make the profit. Effect might be a stabilization of employees, such as carpenters, masons, painters, electricians, plumbers, paper hangers, and some common labor. There also might be a tendency to improve the type of construction that is often foisted on the public today by the amateur.
33. How many workmen do you have?
Twelve regularly: Mr. Rowe, Mr. Bennett, Mr. Robinson, two bookkeepers, two clerks, one credit man, three truck drivers, and one yard man.
34. Are the men especially trained for their work in the lumber company?
Yes, those who operate the business. Mr. Robinson is a graduate of New York University and Biltmore Forest School. Mr. Rowe attended Rutgers. bookkeepers, business college. Yardmen get in service training similar to apprentice workers.
35. Is there a division of labor?
Yes, persons best fitted for the job are selected whether it be office help or yardmen.
36. What are the occupational hazards? They are nil.
37. What are the occupational advantages?
It is not a seasonal business. Employees work twelve months a year, year in and year out. It is healthful.
38. Do you carry compensation?
Yes, it is based on the amount of the payroll.
39. Do you carry insurance?
Yes, fire insurance figured on annual inventory.

Adaptation of Survey Material for School Use

I. Preplan

A. Possible approaches to the study of the local commercial enterprise

1. Utilities of lumber in classroom
   a. Tables
   b. Bookcases
   c. Bookends
   d. Toys
   e. Magazine racks
2. Study of paper
3. Units
   a. Transportation: boats, airplanes, trains, etc.
   b. Home: houses (people, animals), furniture.

B. Resources available

1. Easily accessible
   a. Delmar Grade School
      (1) Books:
         The Story of Lumber—S. W. Bassett
         Best Stories—M. Hardy (p. 247-82)
         A Story About Big Trees—H. S. Read
         Elementary Industrial Arts—L. L. Winslow (p. 296-325)
         The Story of the Forest—J. G. Dorrance
         The Forest Party—M. L. Moe
         A Forest Story—J. Kosieseh
      (2) Magazines:
         Better Homes and Gardens
         Handicraft
         Junior Natural History
         Leisure
         Nature (2)
         National Geographic (2)
         Parents
         Playmate
         Popular Science
         School Arts
      (3) Pictures:
         Seventeen pictures on the history of lumber
   b. Elsmere Grade School
      (1) Books:
         How the World is Housed—Carpenter
         Compton's Pictured Encyclopedia (2) Vol. 5 (p. 2076-83)
         Lumber—From Logging Camp to Sawmill—The World Book Vol. 6 (p. 3532-35)
   c. Slingerlands Grade School
         Compton's Pictured Encyclopedia (2) Vol. 5 (p. 2076-83)
   d. Normansville School
      (1) Books:
         How the World is Sheltered—Carpenter (p. 73-90)
         First Book of Forestry—Roth
         Industries of Today—Lane (p. 59-67)
         Around the World—Carroll (p. 20-21)

(2) Magazines:

Grade Teacher—September 1933

e. Van Wies Point School

(1) Books:

How the World is Clothed, "Brazil Wood"—Carpenter (p. 129)
First Book of Forestry—F. Roth
Big People and Little People of Other Lands—E. R. Shaw (p. 23, 51, 112)
Strange Lands Near Home, "An Enemy in the Brazilian Forest"—Brakley (p. 52)
Field and Forest Series—M. L. Pratt Vol. VII
Stories of Australia—M. L. Pratt (p. 23)
Agriculture for Beginners—Buckett (p. 88)
First Lessons in Nature Study—E. M. Patch
The United States Among the Nations—Atwood
Our State and Continent—A. L. Forsythe
Study Readers, Book VI—Packman (p. 280, 404, 412)
Trees Every Child Should Know—J. E. Rogers
The Knights of the Round Table—Frost (p. 49)
Wonders of Science—The Children's Hour
The Golden Fleece—J. Baldwin
Learn to Study Readers, Book 1—Horn and Shields
Compton's Pictured Encyclopedia
Book of Knowledge
Pathways in Science, "Learning About Our World"—Craig and Cordy

f. Houck's Corners School

(1) Books:

Study Readers, Book VI—Packman (p. 280, 412, 404)
South America and the Old World—Thomas
The Book of Nature Myths—Holbrook
Our State and Continent—Atwood
Compton's Pictured Encyclopedia
Pathways in Science Learning—About our World—G. S. Craig
First Lessons in Nature Study—Patch
First Study of Plant Life—Atkinson
Life Story of the Oak (p. 194-203)
The Struggle of the White Pine (p. 220-37)
Introduction to World Geography—Knowlton
Compton's Pictured Encyclopedia
Appleton's New Practical Encyclopedia (Vol. VI p. 208-09)
Agriculture for Beginners—Buckett (p. 88)
Industries of Today—Among the Pines—Rowe (p. 59)
Strange Lands Near Home—Buckly (p. 52)
Big People and Little People of Other Lands—Shaw (p. 23-51 and 112)

(2) Magazines:

Nature Magazines, September 1932, p. 129; May 1933, p. 243; February 1933, p. 76; November 1934; December 1935; June 1935; July 1935, p. 51.

2. Less Accessible:
   a. Bethlehem Central Library
      (1) Books:
         Wood and Lumber—Clifton—Peoria Manual Arts Press, 1927
         The Corduroy Trail (fiction)—McGoldrick
         Lumberjack—Stephen
         Swift Rivers (fiction)—Meigs
         The Black Trail—White
         Our Native Trees and How to Identify Them—Habits and Peculiarities—Keeler
         Field Book of American Trees and Shrubs—Mathes
         Problem of Artistic Wood Turning—Ensinger
      (2) Magazines:
         American Builder and Building Age
         Cornell Rural School Leaflet—January 1934 *Woody Plants in Winter* Bulletin No. 154—Mass. Forest Park Association. Dutch Elm Disease.
      (3) Pictures:
         Sentinel Pine—painting reproduction—Burr
         General Sherman Tree—picture story — (contains 600,000 board feet of lumber)
   b. Harmanus Bleecker Library—Dove Street, Albany, N. Y.
      (1) Books:
         Lumber and Its Uses—Kellogg—691 K
         Kiln Drying of Lumber—Koehlee—691 K
         Lumber—Kolman—691 K
         Lumbering, Mississippi Valley—Russell—977 R
         Lumberjacks—Meader—977 M
         Lumberjacks—808 L
         Songs and Ballads of Maine—R. P. Gray
         Lumbermen's Legends—E. Shephard
         Lumbermen's Legends—J. Stevens
   c. New York State Library—Washington Avenue, Albany
      (1) Books:
         The Physical Properties of Lumber—Ivery—620.12
         Wood, Lumber and Timber—Hayward—674—2H42
         Wood and Lumber—Newell—N54—691.1
         Lumber, Its Manufacture and Distribution—Bryant—674—B911.
         Lumber and Its Uses—Kellogg—674—K29
         Scrap Book 1903—1910 B31-040 (Newspaper clippings arranged chronologically)
         The Story of Lumber—Bassett—338.1—B31
         The Drain Upon the Forests—Kellogg—338.1
         Albany and Schenectady Counties—Albany Part 2—Howell, Tenney and Munsell—pages 611-613 338.1—Qa32

C. Acquired information found and recorded
   1. Kiln Drying of Lumber*
   2. The Kiln structure*
   3. Air Drying of Lumber*

* The complete report on this topic was written by the committee. It is omitted here for lack of space.

D. General Principles:
1. Lumber is not sold at a standard price because of the seasonal changes in world market.
2. The periodical fluctuation of the price of lumber is due to seasonal demands.
3. The lumber companies today serve the public to greater advantage by including a complete line of builders supplies.
4. Officers of lumber companies have the requirement of being trained to carry on this type of enterprise.
5. Lumber companies are established where they are most accessible to railroads and water ways.
6. Local lumber is approximately the same price as imported lumber because of the mass production of the latter.
7. Kiln drying of lumber is preferred to air drying because the lumber is subject to less deterioration.
8. Transportation of lumber by water is the common practise because of lower shipping rates.
9. Interstate Commerce Commission regulates freight rates by dividing the United States into freight territories.

E. Specific Principles:
1. Due to the rapid growth of the tri-village area, the demand for lumber has greatly increased.
2. The local lumber company carries a complete line of builders supplies, including all necessities.
3. The local lumber company is located near the D and H Railroad and Delaware Ave.
4. The greater part of the local lumber supply is kiln dried.
5. The local lumber company receives their lumber thru the Port of Albany.

F. Children's questions:
1. Why is some lumber wrapped up in pink paper?
2. How do they weigh lumber?
3. What is the unit of measure in lumbering?
4. What are some substitutes for lumber?
5. Why does lumber warp?
6. Is warped lumber used?
7. What is a kiln?
8. How is kiln constructed?
9. How is the lumber piled and the reason?
10. Why are the majority of houses built of lumber?

G. Possible Activities:
1. Mental
   a. Research on the kiln-drying process
   b. Research on the air-drying process
   c. Knowledge of conservation
      (1) Life of Teddy Roosevelt
      (2) Seasonal growth of tree
   d. Science of terminology as practised by lumbermen.
2. Hand or manipulative
   a. Tree booklet illustrating leaf skeleton and other characteristics
   b. Pictorial map locating tree belts
   c. Construct a model kiln
   d. Construct a model of the local lumber companies

3. Fine arts—music and art
   a. Rhythm of the hammer and saw
   b. Making up songs of trees
   c. Paint pictures of trees, etc.
   d. Draw plans of playhouses
   e. Plaster of Paris models

II. Possible outcomes:
   a. Understanding of the principles
      (1) Knowledge of many facts
      (2) Skills, technics, and knowledge
         (a) Social science, health, civics, geography, and history
            1. Reforestation
         (b) Language arts
            1. Words specially applicable to this industry, such as demand, supply, kiln, strike
         (c) Natural science
            1. Growth of trees
         (d) Physical science
            1. Construction of saw

I. Possible attitudes:
   1. Greater appreciation of lumber
   2. Correct attitude toward preservation and conservation
   3. Appreciation of own homes
   4. Appreciation of man's ability to transport goods